VERMONT CASTINGS | GROUP

# Freestanding Direct Vent Gas Stove

## with the LexFire Burn System™

## Model: RFSDV34

### INSTALLER/CONSUMER SAFETY INFORMATION

**PLEASE READ THIS MANUAL BEFORE INSTALLING AND USING APPLIANCE**

**WARNING!**

**IF THE INFORMATION IN THIS MANUAL IS NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.**

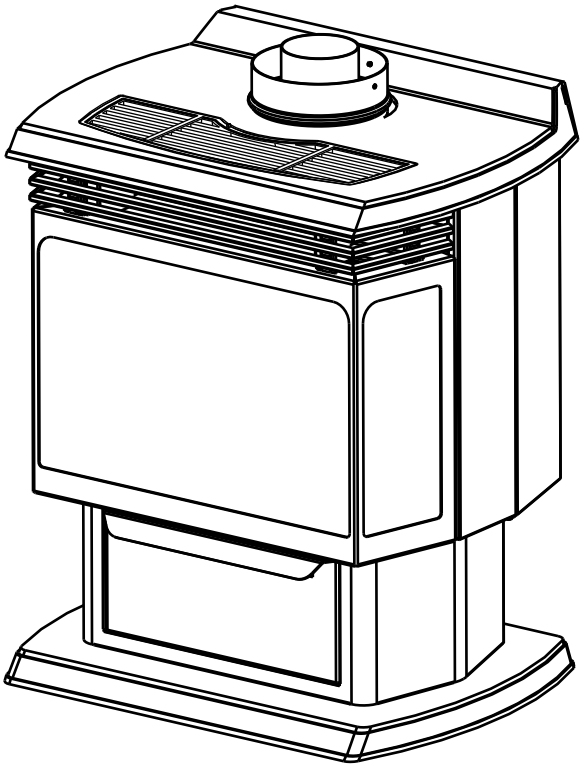
**FOR YOUR SAFETY**

**Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

**WHAT TO DO IF YOU SMELL GAS:**

- Do not try to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from your neighbor's phone. Follow the gas suppliers instructions.
- If you cannot reach your gas supplier call the fire department.

DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.



## Installation Instructions and Homeowner's Manual

DESIGN CERTIFIED

CERTIFIED

**INSTALLER: Leave this manual with the appliance.**
**CONSUMER: Retain this manual for future reference.**

10003550 1/13 Rev. 13

# Table of Contents

**PLEASE READ THE INSTALLATION & OPERATING INSTRUCTIONS BEFORE USING THIS APPLIANCE.**

**Thank you and congratulations on your purchase of an Vermont Castings Group gas stove.**

**IMPORTANT: Read all instructions and warnings carefully before starting installation. Failure to follow these instructions may result in a possible fire hazard and will void the warranty.**

**Installation & Operating Instructions**
- General Information, Warnings, Cautions ..... 3
- Requirements for the Commonwealth of Massachusetts ..... 4
- Unit Dimensions ..... 5
- Locating Your Stove ..... 6
- Clearance to Combustibles ..... 6
- High Elevations ..... 6
- Gas Inlet and Manifold Pressures ..... 6
- Gas Specifications ..... 6
- Preparation ..... 6
- Gas Line Installation ..... 6
- Remote Switch Installation ..... 7

**General Venting Information**
- General Venting Information-Termination Location ..... 8
- General Information on Assembling Vent Pipes ..... 9
- How to Use the Vent Graph ..... 10
- Vertical Sidewall Applications & Installation ..... 10
- Below Grade Installations ..... 13
- Vertical Through-the-Roof Applications & Installations ..... 14
- Venting Components ..... 16

**Operating Instructions**
- Glass Information ..... 17
- Window Frame Assembly Removal ..... 17
- Glass Cleaning ..... 17
- Log Set and Lava Rock Material Installation ..... 17
- Flame & Temperature Adjustment ..... 19
- Flame Characteristics ..... 19
- Lighting & Operating Instructions ..... 20
- Troubleshooting NOVA SIT 820 Millivolt Valve ..... 21
- Instructions for RCSITE ..... 22
- Troubleshooting ..... 25

**Maintenance**
- Cleaning the Standing Pilot Control System ..... 27
- Wiring Diagrams ..... 28

**Replacement Parts** ..... 29

**Optional Accessories**
- Fan Kits ..... 31
- Optional Brass Trim Kit ..... 32
- Remote Control Units ..... 32

**Warranty** ..... 35

**Energuide** ..... 36

# Installation & Operating Instructions

This gas stove should be installed by a qualified installer in accordance with local building codes and with current CSA-B149.1 Installation codes for Gas Burning Appliances and Equipment. If the unit is being installed in a mobile home, the installation should comply with the current CAN/USA Z240.4 code. For USA Installations follow local codes and/or the current National Fuel Gas Code. ANSI Z223.1/NFPA 54.

FOR SAFE INSTALLATION AND OPERATION PLEASE NOTE THE FOLLOWING:

1 . This unit gives off high temperatures and should be located out of high traffic areas and away from furniture and draperies.
2. Children and adults should be alerted to the hazards of the high surface temperatures of this unit and should stay away to avoid burns or ignition of clothing.
3. **CAUTION: Due to high glass surface temperature children should be carefully supervised when in the same room as unit.**

4. Young children should be carefully supervised when they are in the same room as the appliance. Toddlers, young children and others may be susceptible to accidental contact burns. A physical barrier is recommended if there are at risk individuals in the house. To restrict access to a fireplace or stove, install an adjustable safety gate to keep toddlers, young children and other at risk individuals out of the room and away from hot surfaces.
5. Under no circumstances should this unit be modified. Parts removed for servicing should be replaced prior to operating this unit again.
6. Installation and any repairs to this unit must be performed by a qualified installer, service agency or gas supplier. A professional service person should be contacted to inspect the unit annually. More frequent cleaning may be required due to excess lint and dust from carpeting, bedding material, etc.
7. Control compartments, burners and air passages in this unit should be kept clean and free of dust and lint. Make sure that the gas valve and pilot light are turned off before you attempt to clean this unit.
8. The venting system (chimney) of this unit should be checked at least once a year and if needed your venting system should be cleaned.
9. Keep the area around your unit clear of combustible materials, gasoline and other flammable vapour and liquids. This unit should not be used as a drying rack for clothing, nor should Christmas stockings or decorations be hung on or around the unit.
10. Under no circumstances should any solid fuels (wood, coal, paper or cardboard etc.) be used in this unit.
11. The flow of combustion and ventilation air must not be obstructed in any way.
12. When the unit is installed directly on carpeting, vinyl tile or any combustible material other than wood, this unit must be installed on a metal or wood panel extending the full width and depth of the unit.
13. This unit requires adequate ventilation and combustion air to operate properly.
14. This unit must not be connected to a chimney flue serving a separate solid fuel burning unit.
15. When the unit is not in use it is recommended that the gas control valve be left in the **OFF** position.
16. This appliance is approved for bedroom installations in the U.S. and Canada.

**RFSDV34**
**Certified To**

**ANSI Z21.88 / CSA 2.33 Latest Editions**
**Vented Gas Fireplace Heaters**

**This appliance may be installed in an aftermarket permanently located, manufactured home or mobile home, where not prohibited by local codes.**
**This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.**
**Model RFSDV34RMH can be installed in manufactured (mobile) homes by OEM.**

**IMPORTANT:**
**PLEASE REVIEW THE FOLLOWING CAREFULLY**

Remove any plastic from from parts before turning the unit ON.
It is normal for stoves fabricated of steel to give off some expansion and/or contraction noises during the start up or cool down cycle. Similar noises are found with your furnace heat exchanger or car engine.
It is not unusual for your gas stove to give off some odor the first time it is burned. This is due to the curing of the paint and any undetected oil from the manufacturing process.
**Please ensure that your room is well ventilated-open all windows.**
It is recommended that you burn your stove for at least ten (10) hours the first time you use it. If the optional fan kit has been installed, place the fan switch in the “OFF” position during this time.

**Proposition 65 Warning:** Fuels used in gas, woodburning or oil fired appliances, and the products of combustion of such fuels, contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.
California Health & Safety Code Sec. 25249.6

# Installation & Operating Instructions

## Requirements for the Commonwealth of Massachusetts

All gas fitting and installation of this heater shall only be done by a licensed gas fitter or licensed plumber.

For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

### Installation of Carbon Monoxide Detectors

At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gas fitter shall observe that a hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontally vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors.

In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.

In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

### Approved Carbon Monoxide Detectors

Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and ANSI/UL 2034 listed and IAS certified.

### Signage

A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, **"GAS VENT DIRECTLY BELOW, KEEP CLEAR OF ALL OBSTRUCTIONS".**

### Inspection

The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.

### Exemptions

The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

- The equipment listed in Chapter 10 entitled "Equipment Not Required To Be Vented" in the most current edition of NFPA 54 as adopted by the Board; and
- Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

## MANUFACTURER REQUIREMENTS

### Gas Equipment Venting System Provided

When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:

- Detailed instructions for the installation of the venting system design or the venting system components; and
- A complete parts list for the venting system design or venting system.

#### Gas Equipment Venting System NOT Provided

When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies "special venting systems", the following requirements shall be satisfied by the manufacturer:

- The referenced "special venting system" instructions shall be included with the appliance or equipment installation instructions; and
- The "special venting systems" shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design instructions shall remain with the appliance or equipment at the completion of the installation.

# Stove Dimensions

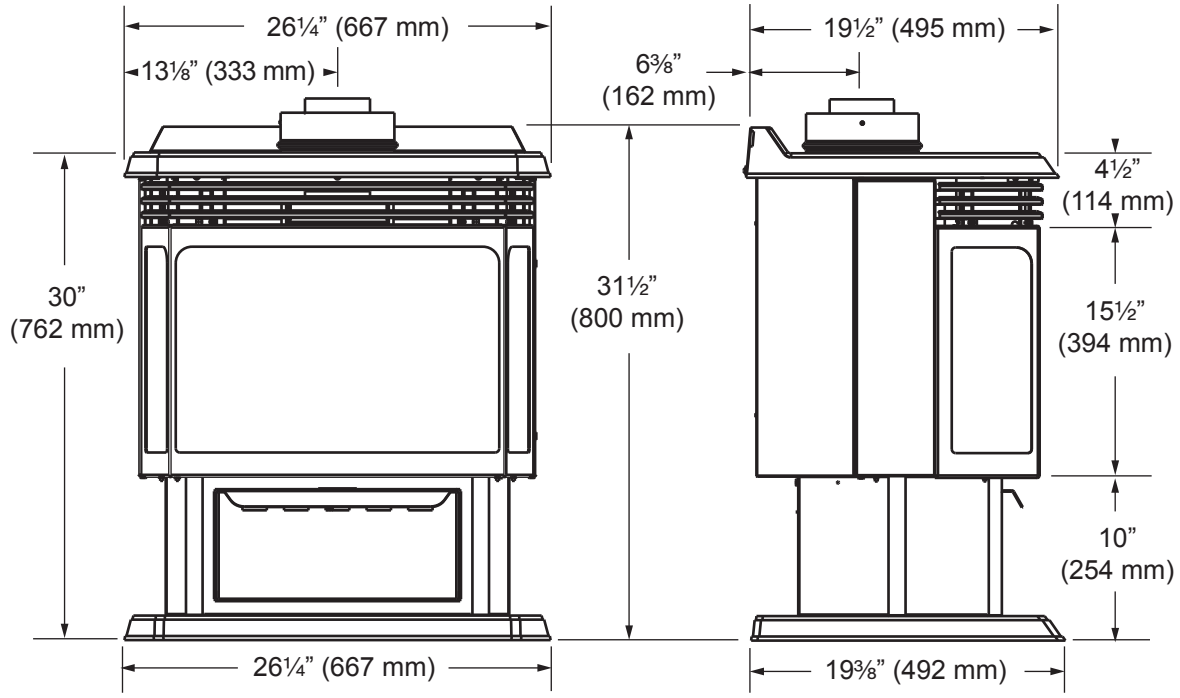



**Fig. 1** Stove specifications and framing dimensions.

## Locating Your Stove

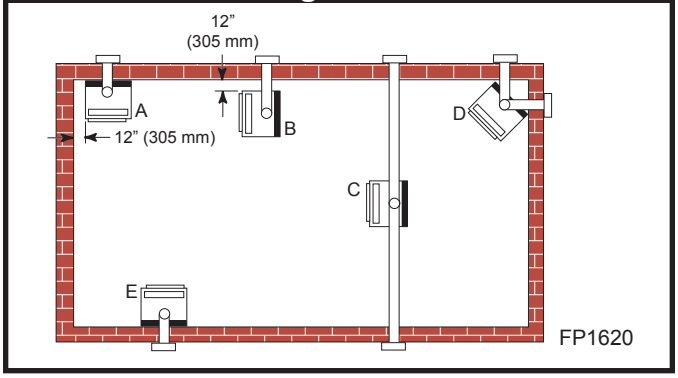



**Fig. 2** Locate gas stove.

A) Flat on wall* B) Room Divider* C) Island
D) Cross Corner E) Flat on wall corner

**Note (Fig. 2):** *(A) and (B) must maintain a 12" (305 mm) clearance between the wall and side glass of stove.

**There is a minimum vertical rise required for the venting, which varies depending on the application. The maximum horizontal run also has restrictions. Before starting the installation, become familiar with venting instructions starting on Page 9.**

## Clearance to Combustibles

Top of Unit to Ceiling ..... 36" (914 mm)

**Appliance**

Back ..... 0" (0 mm)
Side ..... 12" (305 mm)
Floor ..... 0" (0 mm)
Corner ..... 0" (0 mm) to Back Edges
Vent Pipe ..... 1" (25 mm)

## High Elevations

**Input ratings are shown in BTU per hour and are certified without deration for elevations up to 4,500 feet (1,370 m) above sea level.**

**For elevations above 4,500 feet (1,370 m) in USA, installations must be in accordance with the current ANSI Z223.1/NFPA 54 and/or local codes having jurisdiction.**

**In Canada, please consult provincial and/or local authorities having jurisdiction for installations at elevations above 4,500 feet (1,370 m).**

## Gas Inlet and Manifold Pressures

| | Natural | LP (Propane) |
|---|---|---|
| Inlet Minimum | 5.5" w.c. | 11.0" w.c. |
| Inlet Maximum | 14.0" w.c. | 14.0" w.c. |
| Manifold Pressure | 3.5" w.c. | 10.0" w.c. |

## Gas Specifications

| Model | Fuel | Gas Control | Max. Input BTU/h | Min. Input BTU/h |
|---|---|---|---|---|
| RFSDV34TSRN | Nat | Millivolt Hi/Lo | 30,000 | 21,000 |
| RFSDV34TSRP | Prop | Millivolt Hi/Lo | 30,000 | 22,500 |

## Preparation

The use of wallpaper adjacent to this stove is not recommended, as the high heat given off by this stove may adversely affect the binders in the adhesive used to apply the wallpaper.

Before beginning, remove the window frame assembly from the stove. Also check to make sure there is not hidden damage to the stove. Take a minute and plan out the gas, vent and electrical supply. Refer to Window Frame Assembly Removal Section.

## Gas Line Installation

**When purging gas line, the front window frame assembly must be removed.**

The gas pipeline can be brought in through the rear of the stove as well as the bottom. Knockouts are provided on the bottom behind the valve to allow for the gas pipe installation and testing of any gas connection. It is most convenient to bring the gas line in from the rear right side of the valve as this allows fan installation or removal without disconnecting the gas line.

The gas line connection can be made with properly tinned 3/8" copper tubing, 3/8" rigid pipe or an approved flex connector. Since some municipalities have additional local codes, it is always best to consult your local authority and the National Fuel Gas Code, ANSI Z223.1/NFPA 54 in the USA or the CSA-B149.1 installation codes.

**Always check for gas leaks with a mild soap and water solution. Do not use an open flame for leak testing.**

The gas control is equipped with a captured screw type pressure test point, therefore it is not necessary to provide a 1/8" test point up stream of the control.

When using copper or flex connector use only approved fittings. Always provide a union when using black iron pipe so that the gas line can be easily disconnected for burner or fan servicing . See gas specifications for pressure details and ratings.

The stove valve must not be subjected to any test pressures exceeding 1/2 psi. Isolate or disconnect this or any other gas appliance control from the gas line when pressure testing.

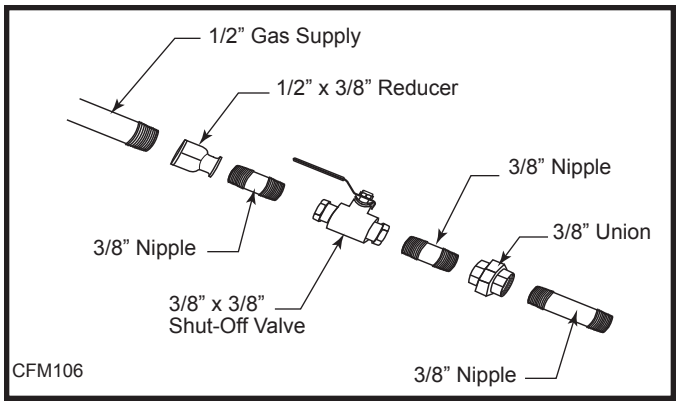



**Fig. 3** Typical gas line connection.

## Installation of Remote Switch for RSN/RSP Gas Valve

**NOTES: The remote ON/OFF switch cannot be fitted to units using the Honeywell Radio Frequency control valve.**

**If the stove has been fitted with the RCSITEA Control, the ON/OFF function is controlled by the remote handset or receiver switch. Refer to Page 22.**

Install the ON/OFF switch assembly on either the rear right or rear left side of the stove.

1. Remove the screw at the back of the cabinet top either on the left or the right side of the stove.
2. Position switch assembly onto the back of the stove, then fasten two (2) screws as shown in Figure 3.
3. Attach wiring under the clips on the rear casing (Fig. 4) and install wiring through the rear opening of the stove before connecting to the valve as shown in Figure 5.

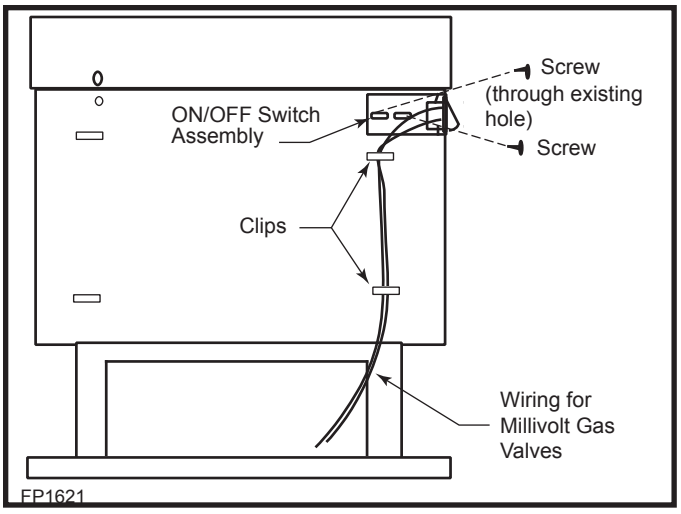



**Fig. 4** Attach wiring under clips on rear casing.

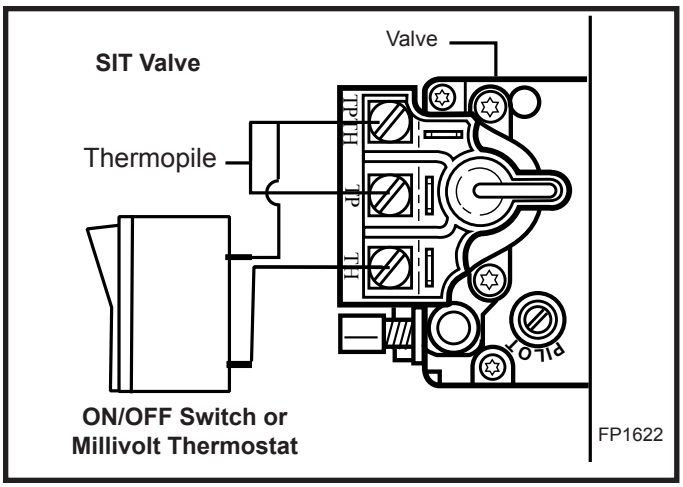
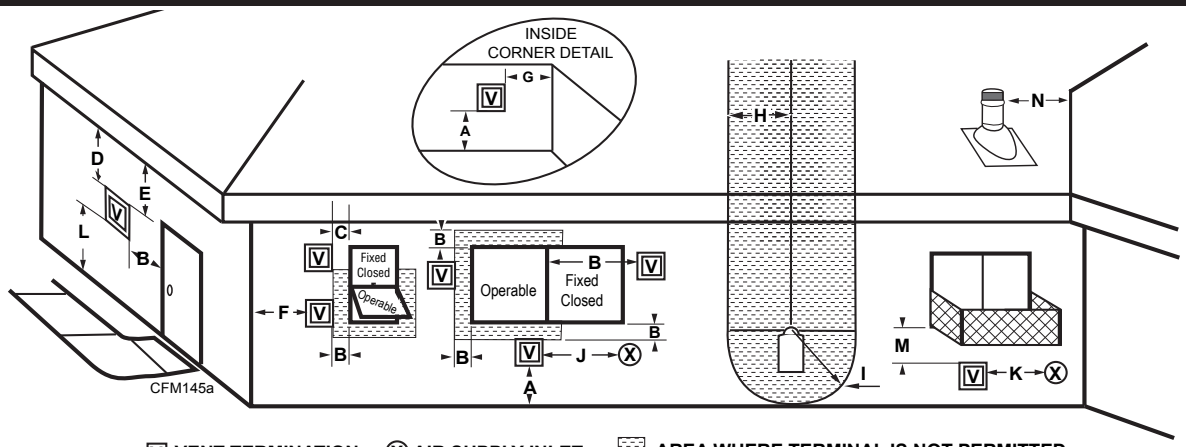



**Fig. 5** Install wiring to switch before connecting to valve.

## General Venting Information - Termination Location




V VENT TERMINATION  X AIR SUPPLY INLET  AREA WHERE TERMINAL IS NOT PERMITTED

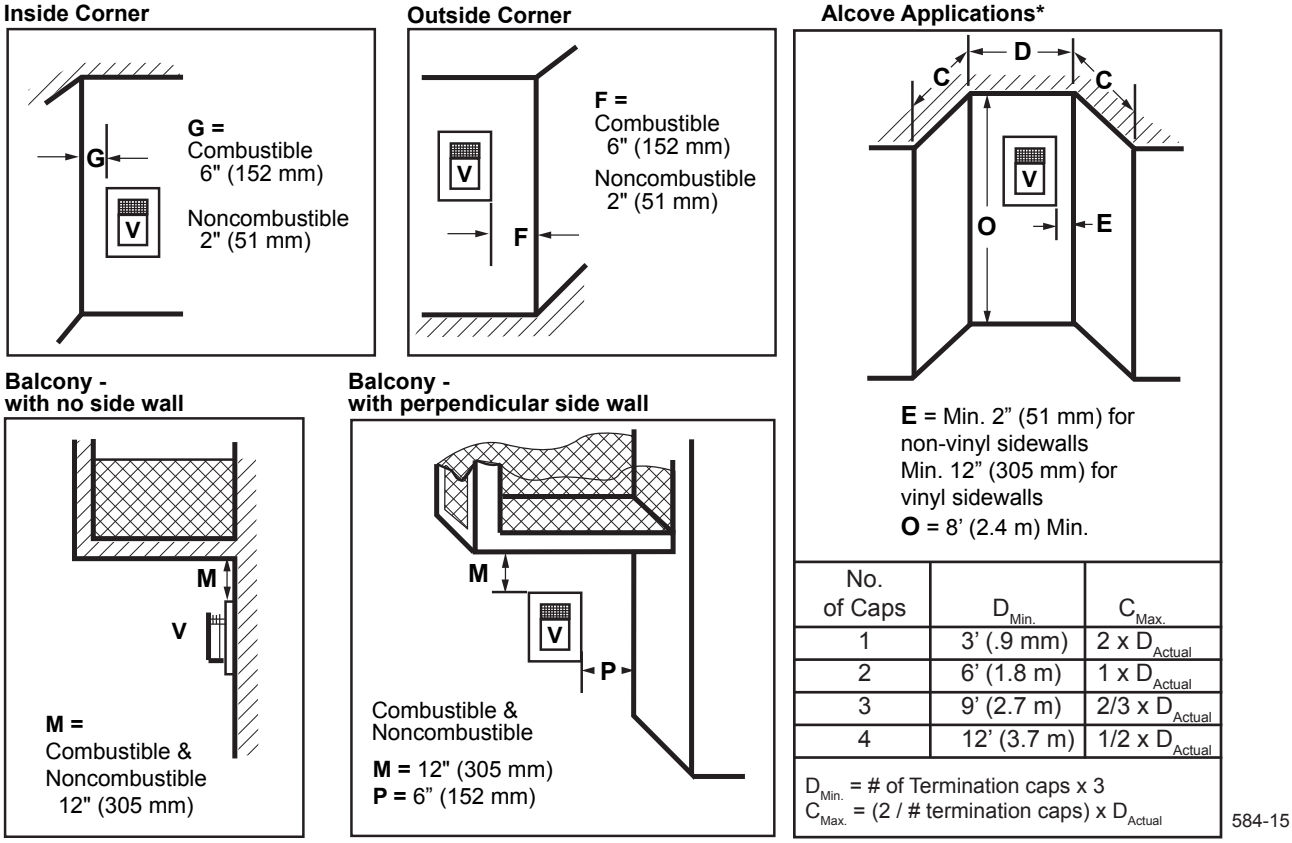
| | Canadian Installations[1] | US Installations[2] |
|---|---|---|
| A = Clearance above grade, veranda, porch, deck, or balcony | 12” (30cm) | 12” (30cm) |
| B = Clearance to window or door that may be opened | 6” (15cm) for appliances < 10,000Btuh (3kW), 12” (30cm) for appliances > 10,000 Btuh (3kW) and < 100,000 Btuh (30kW), 36” (91cm) for appliances > 100,000 Btuh (30kW) | 6” (15cm) for appliances < 10,000 Btuh (3kW), 9” (23cm) for appliances > 10,000 Btuh (3kW) and < 50,000 Btuh (15kW), 12” (30cm) for appliances > 50,000 Btuh (15kW) |
| C = Clearance to permanently closed window | 12” (305mm) recommended to prevent window condensation | 12” (305mm) recommended to prevent window condensation |
| D = Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2’ (610mm) from the center line of the terminal | 18” (458mm) | 18” (458mm) |
| E = Clearance to unventilated soffit | 12” (305mm) | 12” (305mm) |
| F = Clearance to outside corner | see next page | see next page |
| G = Clearance to inside corner (see next page) | see next page | see next page |
| H = Clearance to each inside of center line extended above meter/regulator assembly | 3’ (91cm) within a height of 15’ (5m) above the meter/regulator assembly | 3’ (91cm) within a height of 15’ (5m) above the meter/regulator assy |
| I = Clearance to service regulator vent outlet | 3’ (91cm) | 3’ (91cm) |
| J = Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliances | 6” (15cm) for appliances < 10,000 Btuh (3kW), 12” (30cm) for appliances > 10,000 Btuh (3kW) and < 100,000 Btuh (30kW), 36” (91cm) for appliances > 100,000 Btuh (30kW) | 6” (15cm) for appliances < 10,000 Btuh (3kW), 9” (23cm) for appliances > 10,000 Btuh (3kW) and < 50,000 Btuh (15kW), 12” (30cm) for appliances > 50,000 Btuh (15kW) |
| K = Clearance to a mechanical air supply inlet | 6’ (1.83m) | 3’ (91cm) above if within 10 feet (3m) horizontally |
| L = Clearance above paved sidewalk or paved driveway located on public property | 7’ (2.13m)† | 7’ (2.13m)† |
| M = Clearance under veranda, porch, deck or balcony | 12” (30cm)* | 12” (30cm)* |
| N = Clearance to any other obstruction within a horizontal distance of 18” (450mm). | | |

1 In accordance with the current CSA-B149 Installation Codes
2 In accordance with the current ANSI Z223.1/NFPA 54 National Fuel Gas Codes
† A vent shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings
* only permitted if veranda, porch, deck or balcony is fully open on a minimum 2 sides beneath the floor:
NOTE: 1. Local codes or regulations may require different clearances.
2. The special venting system used on Direct Vent Stoves are certified as part of the appliance, with clearances tested and approved by the listing agency.
3. Vermont Castings Group assumes no responsibility for the improper performance of the appliance when the venting system does not meet these requirements.

**Fig. 6** Termination location requirements.

## Termination Clearances

Termination clearances for buildings with combustible and noncombustible exteriors.




| No. of Caps | $D_{Min.}$ | $C_{Max.}$ |
|---|---|---|
| 1 | 3' (.9 mm) | 2 x $D_{Actual}$ |
| 2 | 6' (1.8 m) | 1 x $D_{Actual}$ |
| 3 | 9' (2.7 m) | 2/3 x $D_{Actual}$ |
| 4 | 12' (3.7 m) | 1/2 x $D_{Actual}$ |

$D_{Min.}$ = # of Termination caps x 3
$C_{Max.}$ = (2 / # termination caps) x $D_{Actual}$

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***NOTE:** Termination in an alcove space (spaces open only on one side and with an overhang) is permitted with the dimensions specified for vinyl or non-vinyl siding and soffits. 1. There must be a 3' (914 mm) minimum between termination caps. 2. All mechanical air intakes within 10' (1 m) of a termination cap must be a minimum of 3' (914 mm) below the termination cap. 3. All gravity air intakes within 3' (914 mm) of a termination cap must be a minimum of 1' (305 mm) below the termination cap.

**Fig. 6a** Termination clearances.

## General Information on Assembling Vent Pipes

**Canadian Installations:**

The venting system must be installed in accordance with the current CSA-B149 .1 installation code.

**USA Installations:**

The venting system must conform with local codes and/or the current National Fuel Gas code ANSI Z223.1/NFPA 54.

Only venting components manufactured by Vermont Castings Group can be used in Direct Vent systems.

## Twist Lock Pipes

When using Vermont Castings Group twist-lock pipe it is not necessary to use sealant on the joints. The only areas of the venting system that need to be sealed with high temperature silicone sealant are the collars on the stove and termination, and the sliding joint of any telescopic vent section used in the system.

To join the twist lock pipes together, simply align the beads of the male end with the grooves of the female end, then while bringing the ends together, twist the pipe until the flange on the female end contacts the external flange on the male end. It is recommended that you secure the joints with three (3) sheet metal screws, however this is not mandatory with twist lock pipe.

To make it easier to assemble the joints we suggest putting a lubricant (Vaseline or similar) on the male end of the twist lock pipe prior to assembly.

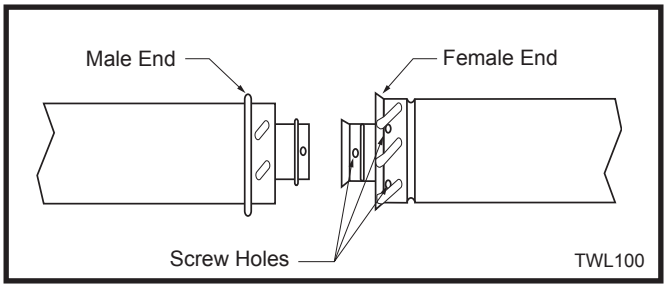



**Fig. 7** Twist-lock pipe joints.

## How to Use the Vent Graph

The vent chart should be read in conjunction with the following vent installation instructions to determine the relationship of the vertical and horizontal dimensions of the vent system.

1. Determine the height of the center of the horizontal vent pipe exiting through the outer wall. Using this dimension on the Sidewall Vent Graph (Fig. 8), locate the point intersecting with the slanted graph line.
2. From the point of this intersection, draw a vertical line to the bottom of the graph.
3. Select the indicated dimension, and position the stove in accordance with same.

**Example A:**

If the vertical dimension from the floor of the unit is 11' (3.4m) the horizontal run to the face of the outer wall must not exceed 14' (4.3 m).

**Example B:**

If the vertical dimension from the floor of the unit is 7' (2.14m), the horizontal run to the face of the outer wall must not exceed 8½' (2.6 m).

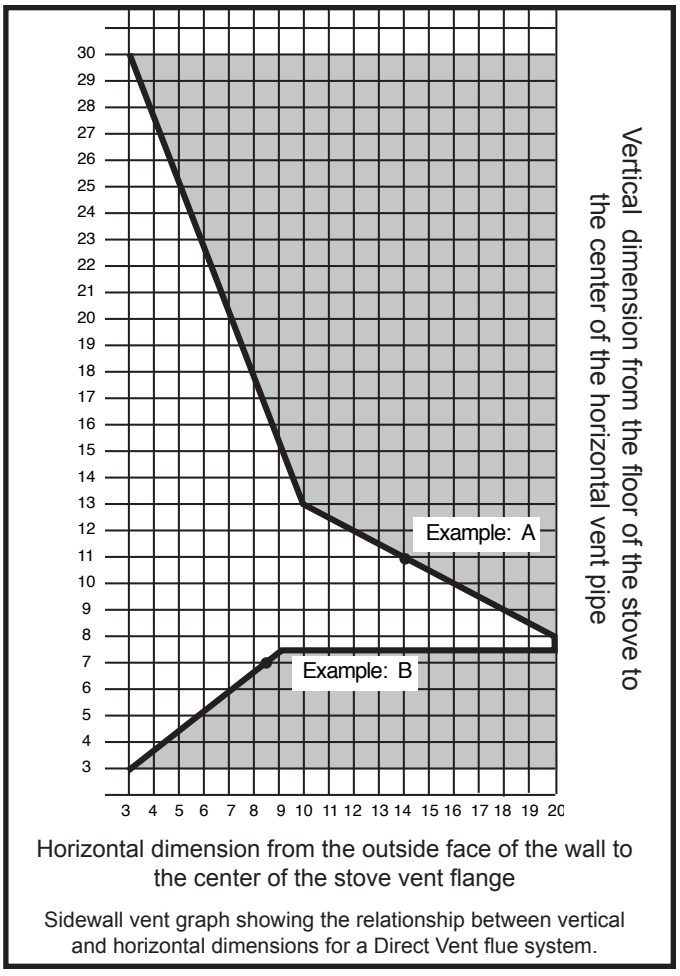



**Fig. 8** Sidewall venting graph. (Dimensions in feet)

## Vertical Sidewall Applications

**Since it is very important that the venting system maintain its balance between the combustion air intake and the flue gas exhaust, certain limitations as to vent configurations apply and must be strictly adhered to.**

The vent graph showing the relationship between vertical and horizontal side wall venting will help to determine the various dimensions allowable.

**Minimum clearance between vent pipes and combustible materials is one 1" (25mm) on top, bottom and sides unless otherwise noted.**

When the vent termination exits through foundations less than 20" (508 mm) below siding outcrop, the vent pipe must flush up with the siding.

It is always best to locate the stove in such a way that minimizes the number of offsets and horizontal vent length of vent pipe from the flue collar of the stove to the face of the outer wall.

Horizontal plane means no vertical rise exists on this portion of the vent assembly.

- The maximum number of 90° elbows per side wall installations is three (3).
- For RFSDV24 and RFSDV34 models, the maximum horizontal rn for a minimum 12" (305 mm) vertical rise is 3' (914 mm). (Fig. 9)

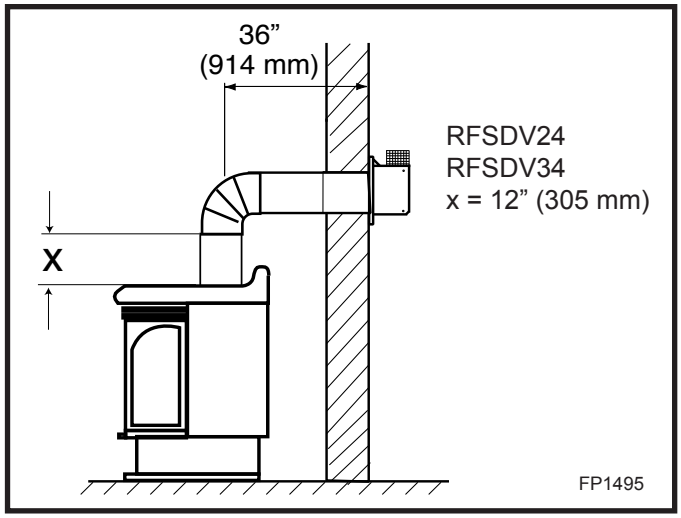



**Fig. 9** Maximum horizontal run.

- If a 90° elbow is used in the horizontal vent run (level height maintained) the maximum horizontal vent length is reduced by 36" (914 mm). (Fig. 10) This does not apply if the 90° elbows are used to increase or redirect a vertical rise. (Fig. 11)

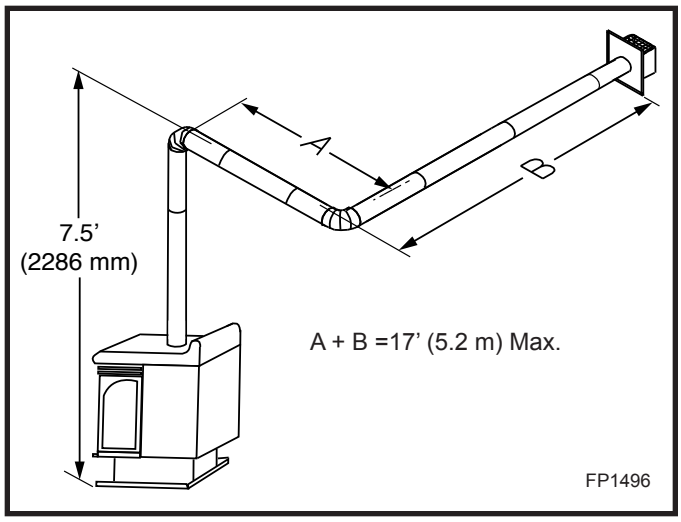



**Fig. 10** 90° elbow used in horizontal vent run.

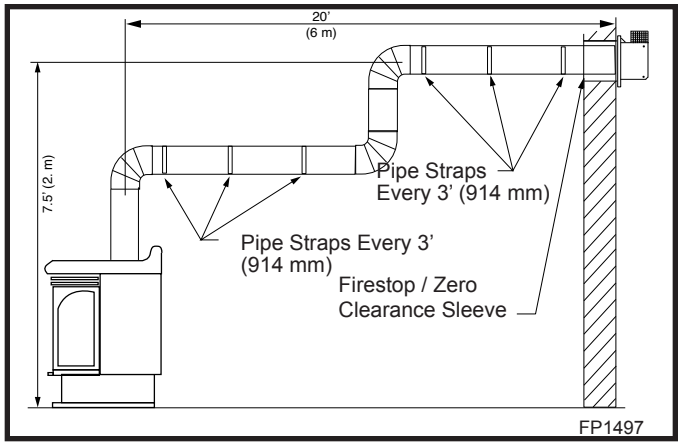



**Fig. 11** 90° elbow used to increase height.

**Example:** According to the chart the maximum horizontal vent length is 20' (6 m). However, if a 90° elbow is used in the horizontal vent, maximum horizontal vent length is reduced to 17' (5.2 m). InFigure 9, the total of Dim. A and Dim. B must not exceed 17' (5.2 m).

- The maximum number of 45° elbows permitted per installation is six (6). These elbows can be installed in either the vertical or horizontal run.
- For each 45° elbow installed in the horizontal run, the length of the horizontal run MUST be reduced by 18" (457 mm). This does not apply if the 45° elbows are installed on the vertical part of the vent system.
- The maximum number of elbow degrees in a system is 270°. (Fig. 12)

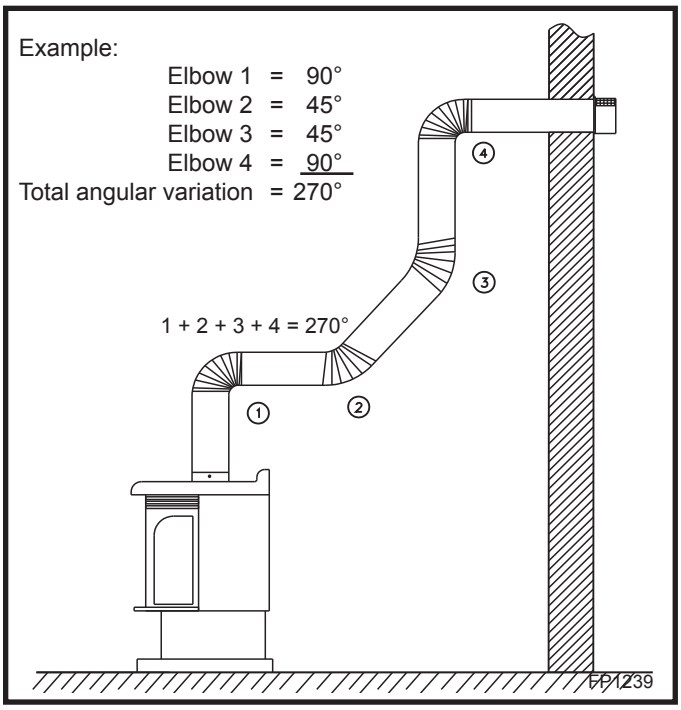



**Fig. 12** Maximum elbow usage.

## Vertical Sidewall Installations

**STEP 1**

Locate vent opening on the wall. It may be necessary to first position the stove and measure to obtain hole location. Depending on whether the wall is combustible or noncombustible, cut opening to size. (Fig. 13)

For combustible walls first frame in opening.

**Combustible Walls:** (Fig. 13) Cut a 9⅜"H x 9⅜"W (240 x 240 mm) hole through the exterior wall and frame as shown.

**Noncombustible Walls:** (Fig. 13) Hole opening must be 7½" (190 mm) in diameter.

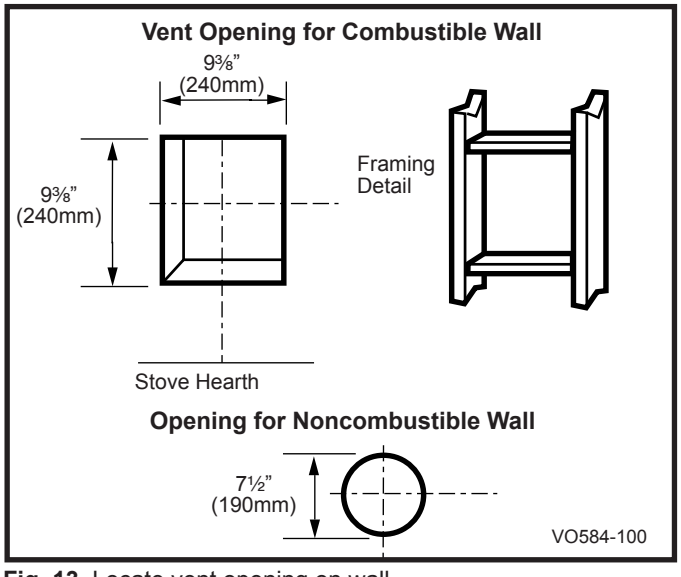



**Fig. 13** Locate vent opening on wall.

**STEP 2**

Measure wall thickness and cut zero clearance sleeve parts to proper length (MAXIMUM 12"/305 mm). Assemble sleeve and attach to firestop with #8 sheet metal screws (supplied). Install firestop assembly. (Fig. 14)

**Zero clearance sleeve is only required for combustible walls.**

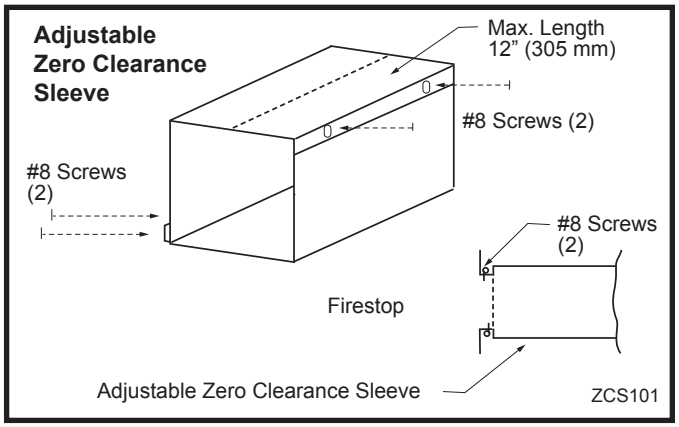



**Fig. 14** Adjustable zero clearance sleeve.

**STEP 3**

Place stove into position. (Fig. 15) Measure the vertical height (X) required from the base of the flue collars to the center of the wall opening.

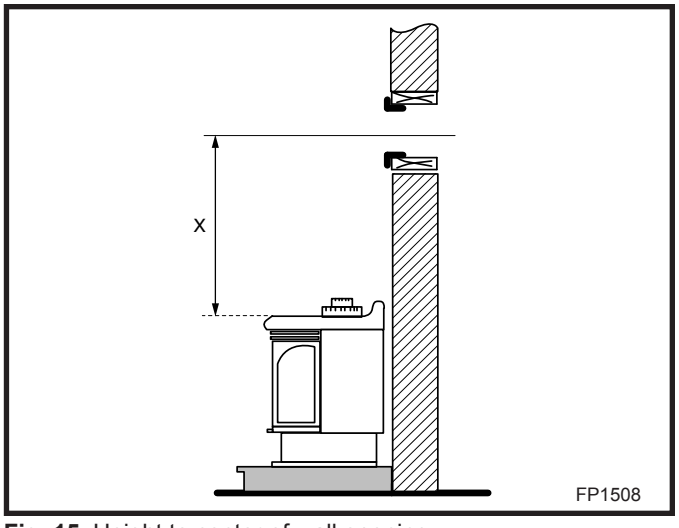



**Fig. 15** Height to center of wall opening.

**STEP 4**

Apply a bead of high temperature sealant to the inner and outer flue collars of the stove and using appropriate venting component(s) attach to stove with three (3) screws. (Fig. 16) Follow with the installation of the inner and outer elbow. Again secure joints as described on Page 8.

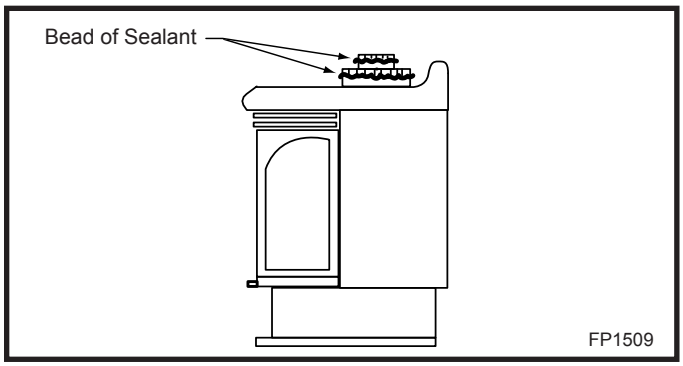



**Fig. 16** Horizontal vent length.

**STEP 5**

Measure the horizontal length requirement including a 2" (51 mm) overlap, ie from the elbow to the outside wall face plus 2" (51 mm) (or the distance required if installing a second 90° elbow). (Fig. 17)

**Always install horizontal venting on a level plane.**

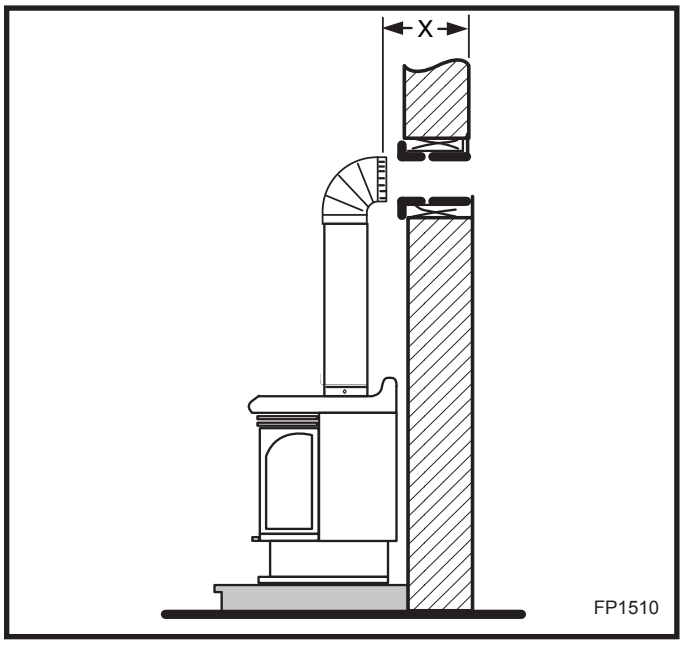



**Fig. 17** Horizontal length to wall.

**STEP 6**

**NOTE: If using charcoal wall plate Pt. #10000257, and collar Pt. # 52203-CG, put them in place before putting the pipe sections through the wall.**

Use appropriate length of pipe sections - telescopic or fixed - and install the horizontal vent sections. The sections which go through the wall are packaged with the starter kit, and can be cut to suit if necessary. (Fig. 18)

**Sealing vent pipe and firestop gaps with high temperature sealant will restrict cold air being drawn in around stove.**

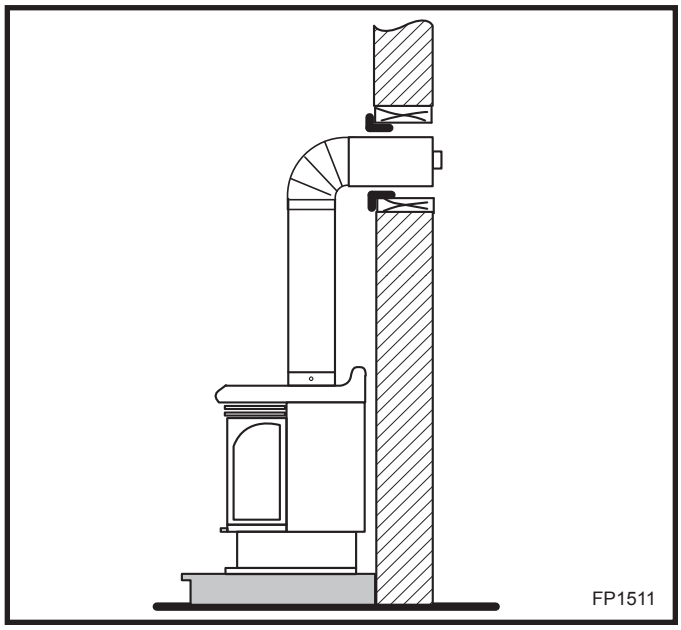



**Fig. 18** Pipe sections through the wall.

**STEP 7**

Apply high temperature sealant to 4" (102 mm) and 7" (179 mm) collars or the termination one inch away from crimped end. Guide the vent terminations 4" and 7" collars into their respective vent pipes. Double check that the vent pipes overlap the collars by 2" (51 mm). Secure the termination to the wall with screws provided and caulk around the wall plate to weatherproof. (Fig. 19)

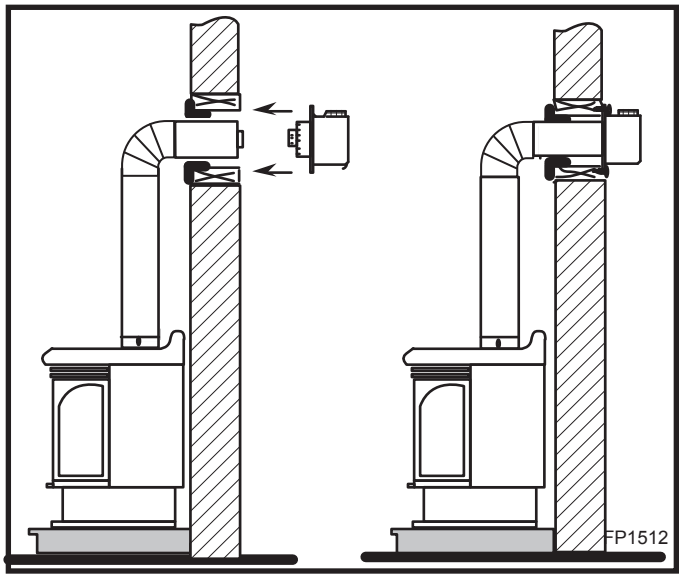



**Fig. 19** Horizontal length to wall.

**Support horizontal pipes every 3' (914 mm) with metal pipe straps.**

**Check stove to make sure it is leveled and properly positioned.**

## Below Grade Installations

When it is not possible to meet the required vent terminal clearances of 12" (305 mm) above grade level a snorkel vent kit is recommended. It allows installation depth of down to 7" (178 mm) below grade level. The 7" is measured from the center of the horizontal vent pipe as it penetrates through the wall.

**If venting system is installed below ground, we recommend a window well with adequate and proper drainage.**

**Ensure sidewall venting clearances are observed.**

If installing a snorkel, a minimum 24" (610 mm) vertical rise is necessary. The maximum horizontal run with the 24" (610 mm) vertical pipe is 36" (914 mm). This measurement is taken from the collar of the stove (or transition elbow) to the face of the exterior wall. Refer to the Sidewall Vent Graph for extended horizontal run if the vertical rise exceeds 24" (610 mm).

1. Establish vent hole through the wall. (Fig. 13)
2. Remove soil to a depth of approximately 16" (406 mm) below base of snorkel. Install drain pipe. Install window well (not supplied). Refill hole with 12" (305 mm) of coarse gravel leaving a clearance of approximately 4" (102 mm) below snorkel. (Fig. 20)
3. Install vent system.
4. Ensure a watertight seal is made around the vent pipe coming through the wall.
5. Apply high temperature sealant caulking (supplied) around the 4" and 7" snorkel collars.
6. Slide the snorkel into the vent pipes and secure to the wall.
7. Level the soil to maintain a 4" (102 mm) clearance below snorkel. (Fig. 20)

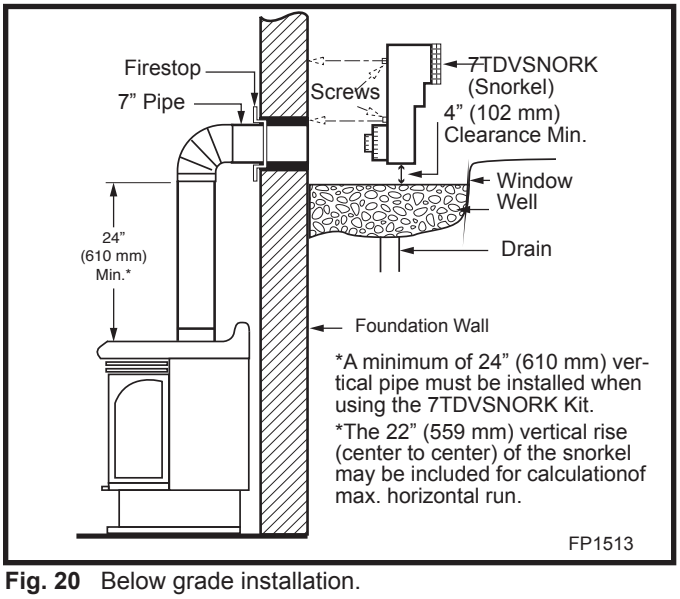



**Fig. 20** Below grade installation.

**Do not back fill around snorkel. A clearance of at least 4" (102 mm) must be maintained between snorkel and the soil.**

If the foundation is recessed, use recess brackets (not supplied) for securing lower portion of the snorkel. Fasten brackets to wall first, then secure to snorkel with self drilling #8 x 1/2 sheet metal screws. It will be necessary to extend vent pipes out as far as protruding wall face. (Fig. 21)

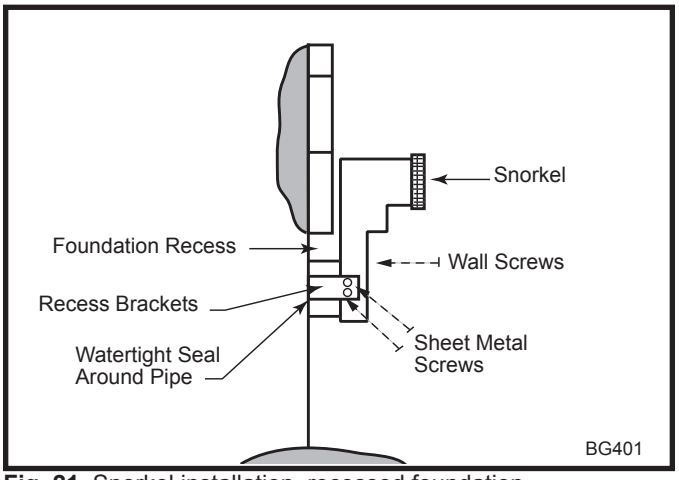



**Fig. 21** Snorkel installation, recessed foundation.

## Vertical Through-the-Roof Applications

This Gas Stove has been approved for:

- Vertical installations up to 40' (12 m) in height. Up to a 10' (3 m) horizontal vent run can be installed within the vent system using a maximum of two 90° elbows.
- Up to two 45° elbows may be used within the horizontal run. For each 45° elbow used on the horizontal level the maximum horizontal length must be reduced by 18" (457 mm).
  Example: Maximum horizontal length
  0 x 45° elbows = 10' (3 m)
  1 x 45° elbows = 8½' (2.6 m)
  2 x 45° elbows = 7' (2.1 m)
- A minimum of an 8' (2.4 m) vertical rise.
- Two sets of 45° elbows offsets within these vertical installations. From 0 to a maximum of 8' (2.4 m) of vent pipe can be used between elbows. (Fig. 22)
- 7DVCS must be used to support offsets. (Fig. 22) This application will require that you first determine the roof pitch and use the appropriate starter kit. (Refer to Venting Components List)

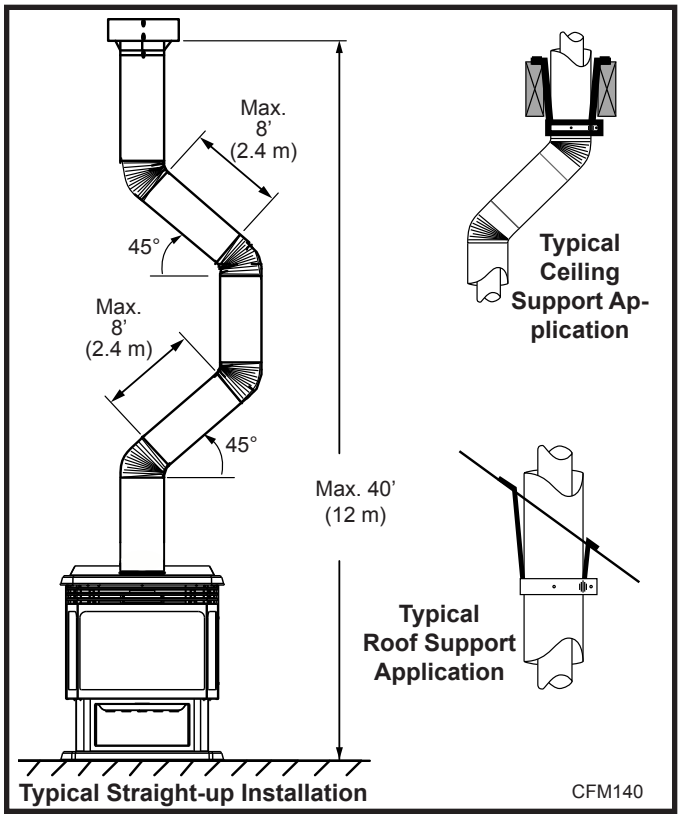
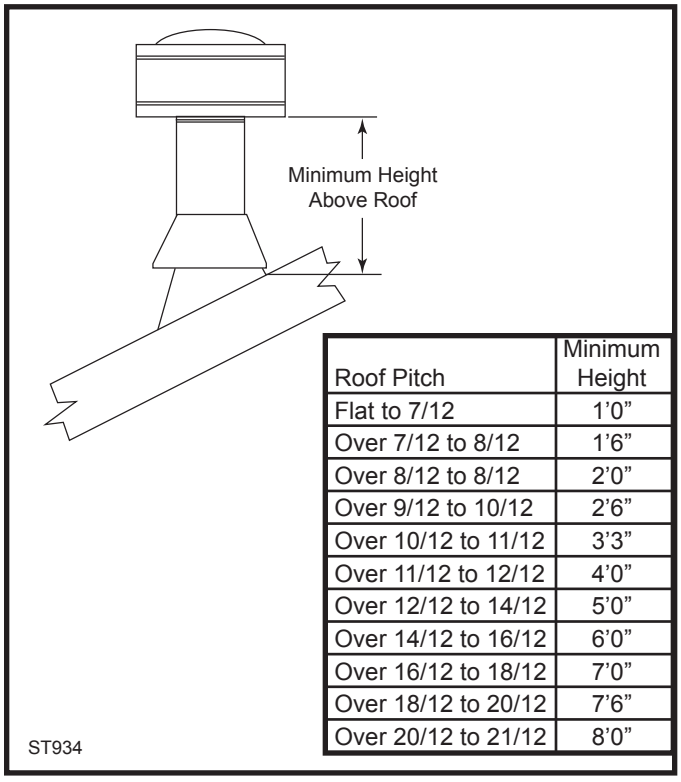



**Fig. 22** Vertical through-the-roof installation.




| Roof Pitch | Minimum Height |
|---|---|
| Flat to 7/12 | 1'0" |
| Over 7/12 to 8/12 | 1'6" |
| Over 8/12 to 8/12 | 2'0" |
| Over 9/12 to 10/12 | 2'6" |
| Over 10/12 to 11/12 | 3'3" |
| Over 11/12 to 12/12 | 4'0" |
| Over 12/12 to 14/12 | 5'0" |
| Over 14/12 to 16/12 | 6'0" |
| Over 16/12 to 18/12 | 7'0" |
| Over 18/12 to 20/12 | 7'6" |
| Over 20/12 to 21/12 | 8'0" |

**Fig. 23** Minimum height above roof requirements.

## Vertical Through-the-Roof Installation

1. Locate your stove.
2. Plumb to center of the 4" (102 mm) flue collar from ceiling above and mark position.
3. Cut opening equal to 9⅜" x 9⅜" (240 x 240 mm).
4. Proceed to plumb for additional openings through the roof. In all cases, the opening must provide a minimum of 1" (25 mm) clearance to the vent pipe, i.e., the hole must be at least 9⅜" x 9⅜" (240 x 240 mm).
5. Place stove into position.
6. Place firestop(s) #7DVFS or Attic Insulation Shield #7DVAIS into position and secure. (Fig. 24)

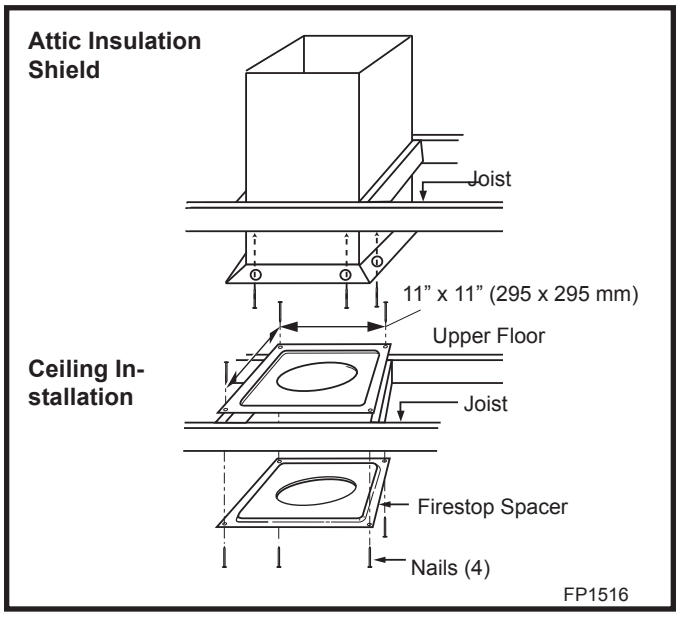



**Fig. 24** Place firestop spacer(s) and secure.

7. Install roof support (Fig. 22) and roof flashing making sure upper flange of flashing is below the shingles. (Fig. 25)
8. Install appropriate pipe sections until the venting is above the flashing. (Fig. 25)
9. Install storm collar and seal around the pipe.
10. Add additional vent lengths for proper height. (Fig. 23)
11. Apply high temperature sealant to 4" and 7" collars.

**If there is a room above ceiling level, firestop spacer must be installed on both the bottom and the top side of the ceiling joists. If an attic is above ceiling level a 7DVAIS (Attic Insulation Shield) must be installed.**

**The enlarged ends of the vent section always face downward. (Fig. 25)**

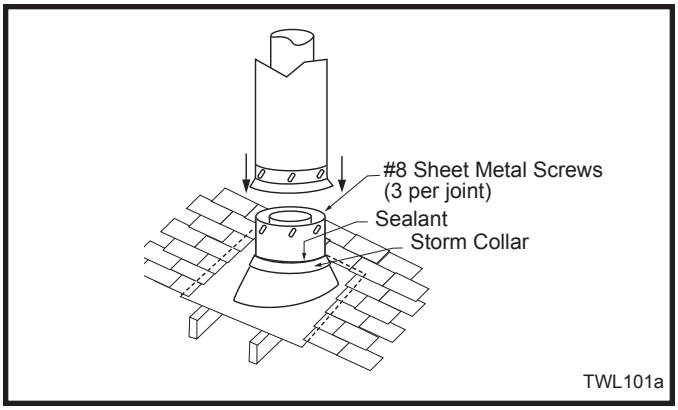



**Fig. 25** Roof flashing.

## Venting Requirements and Options

### Approved Vent System Components

The heater must be vented to the outdoors through an adjacent exterior wall or through the roof. The venting system must be comprised of the appropriate listed venting components specified on this page. These parts are available from Selkirk Corporation, DuraVent Corporation or your Vermont Castings Group Dealer.

### Vermont Castings Group Vent Components

The following kits are available to meet the needs of most installations. Consult your dealer about other vent parts that may be appropriate to complete the installation.

| | |
|---|---|
| Starter Kit | 7TFSSK |
| Starter Kit - Vertical Venting<br>for 7TDVSKV-A order 1/2 t o 612 roof pitch<br>for 7TDVSKV-B order 7/12 to 12/12 roof pitch<br>for 7TDSKV-F order flat roof | 7TDVSKV |
| 45° Elbow Kit for vertical installation offsets | 7TFSDV45 |
| 90° Transition Elbow Kit<br>for Vertical Sidewall Applications or Through-the-Roof | 7TFSDV90 |
| Telescopic Vent Sections | |
| 12” to 18” Adjustable Length | 7TDVP1218 |
| 35” to 64” Adjustable Length | 7TDVP3564 |
| Pipe Sections for Vertical or Horizontal Venting | |
| 4 per box | 7TDVP8” |
| 4 per box | 7TDVP12” |
| | 7TFSDVP24” |
| | 7TDVP36” |
| | 7TFSDVP48” |
| Firestop Spacer | 7DVFS |
| Attic Insulation Shield | 7DVAIS |
| Vertical/Horizontal Combination Offset Support | 7DVCS |

### DuraVent Components

www.duravent.com
Phone: 1-800-835-4429, Fax: 1-707-446-4740

| **Minimum Horizontal Vent Kit** | **2792** |
|---|---|
| Starter Pipe Assembly (incl. inner & outer sections) | 2768* |
| 90° Elbow, Blk. | 46DVA-E90B* |
| 45° Elbow, Gal. | 46DVA-E45 |
| 6” Straight, Blk. | 46DVA-D6B* |
| 9” Straight, Blk. | 46DVA-09B |
| 11” - 14⅝” Adjustable Straight Section | 46DVA-08AB |
| 12” Straight | 46DVA-12 |
| 24” Straight | 46DVA-24B* |
| 36” Straight | 46DVA-36B |
| 48” Straight | 46DVA-48 |
| Horizontal Vent Cap | 46DVA-HC* |
| Wall Plate | 46DVA-DC |
| Vinyl Siding Shield | 46DVA-VSS |
| Snorkel Termination - 14” | 46DVA-SNK-14 |
| Snorkel Termination - 36” | 46DVA-SNK30 |
| Wall Strap | 46DVA-WS |
| Cathedral Ceiling Support Box | 46DVA-CS |
| Storm Collar | 46DVA-SC |
| Wall Thimble | 46DVA-WT |
| Firestop Spacer | 46DVA-FS |
| Flashing 0/12 - 6/12 | 46DVA-F6 |
| Flashing 6/12 - 12/12 | 46DVA-F12 |
| Steel Chimney Conversion Kit | |
| Kit A (6⅝” - 8⅝”) | 46DVA-KCA |
| Kit B (6⅝” - 10½”) | 46DVA-KCB |
| Kit C (6⅝” - 13”) | 46DVA-KCC |
| Masonry Chimney Kit | 46DVA-KMC |
| Vertical Termination Cap (High Wind) | 46DVA-VCH |
| Vertical Termination Cap (Low Profile) | 46DVA-VC |

*Included in Minimum Horizontal Vent Kit #2792

All DuraVent Straight vent pipe sections have a net length 1½” (37 mm) less than the nominal dimension; i.e., a 6” (152 mm) Straight pipe section has an effective length of 4½” (115 mm).

### Selkirk Corporation Vent Components

www.selkirkcorp.com
1301 W. President George Bush Highway Ste. 330
Richardson, TX 75080
Phone: 1-800-992-8368, Fax: 1-877-393-4145

| | |
|---|---|
| Appliance Adapter | 4DT-AAV |
| 90° Elbow, Blk. | 4DT-EL90B |
| 45° Elbow, Blk. | 4DT-EL45B |
| 6” Straight, Blk. | 4DT-06B |
| 9” Straight, Blk. | 4DT-09B |
| 4” - 10” Adjustable Straight Section, Blk. | 4DT-AJ12 |
| 12” Straight, Blk. | 4DT-12B |
| 18” Straight, Blk. | 4DT-18B |
| 24” Straight, Blk. | 4DT-24B |
| 36” Straight, Blk. | 4DT-36B |
| 48” Straight, Blk. | 4DT-48B |
| Horizontal Vent Cap | 4DT-HC |
| Wall Plate | 4DT-WT |
| Vinyl Siding Shield | 4DT-VS |
| Snorkel Termination - 14” | 4DT-ST14 |
| Snorkel Termination - 36” | 4DT-ST36 |
| Wall Strap | 4DT-WS/B |
| Cathedral Ceiling Support Box | 4DT-CCS |
| Storm Collar | 4DT-SC |
| Firestop Spacer | 4DT-FS |
| Flashing 0/12 - 6/12 | 4DT-AF6 |
| Flashing 6/12 - 12/12 | 4DT-AF12 |
| Steel Chimney | |
| Horizontal Kit A | 4DT-HKA |
| Horizontal Kit B | 4DT-HKB |
| Vertical Kit | 4DT-VKC |
| Masonry Chimney Kit | 4DT-MCK |
| Vertical Termination Cap | 4DT-VC |

# Operating Instructions

## Glass Information

**Only glass approved by Vermont Castings Group may be used for replacement. The use of substitute glass will void all product warranties.**

Take care to avoid breaking the glass.

**Under no circumstances is this stove to be operated without the front glass or with a broken glass. Replacement of the glass (with gasket) as supplied by the manufacturer should be done by a licensed qualified service person.**

## Window Frame Assembly Removal

1. Turn the gas supply OFF (Refer to Lighting Instructions).
2. If the unit has been operating allow time for the components to cool.
3. Open the two side doors.
4. Open the clamps on the two sides. (Fig. 26)
5. Pull the frame forward.
6. To reinstall window frame assembly, follow the above procedure in reverse.

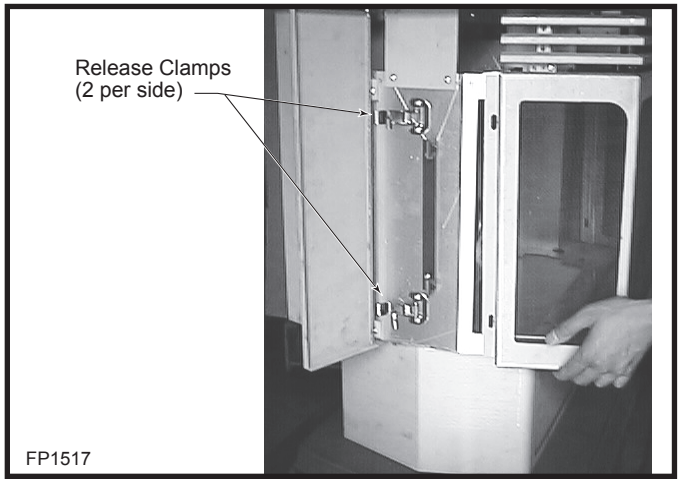



**Fig. 26** Window frame removal.

## Glass Cleaning

It is necessary to periodically clean the glass. During start-up condensation, which is normal, forms on the inside of the glass. This condensation causes lint, dust and other airborne particles to cling to the glass surface.

Also initial paint curing may deposit a slight film on the glass. It is therefore recommended that the glass be cleaned two or three times with a non-ammonia based household cleaner and warm water (We recommend gas stove glass cleaner) within the first few weeks of operation.

After the initial cleaning process the glass should be cleaned two or three times during each operating season depending on the environment in the house.

**Clean the glass after the first two weeks of operation.**

**Do not clean glass when hot.**

**Do not use abrasive cleaners.**

**Do not strike or slam glass.**

## Log Identification Chart

| Logs | RFSDV24 | RFSDV34 |
|---|---|---|
| Log Ember Bed | -- | KR7 |
| Log - Front Left | KR13 | KR8 |
| Log - Front Right | KR14 | KR9 |
| Log - Rear | -- | KR10 |
| Log - Top Left | -- | KR11 |
| Log - Top Right | -- | KR12 |
| Log - Rear Left | KR15 | -- |
| Log - Rear Right | KR16 | -- |

## Log Set and Lava Rock Material Installation

***Figure 27***

1. Remove window frame assembly. (Refer to Window Frame Assembly Removal section)
2. Remove logs from packaging.

**As with all plastic items - these logs and their packaging are not toys and should be kept away from children and infants.**

3. Place rear log (KR10) n rear bracket (ensure log is seated properly, leveled and centered to the unit) so it will not move from side to side and it is firmly positioned on the bracket.
4. Slip front ember log (KR7) down behind the front deflector.
5. Place front left log (KR8*) on top of burner, left side. Using the bottom holes in the log, locate it into the left bracket log locator studs.
6. Place front right log (KR9) on top of burner, right side. Use log's bottom holes to locate it into the right bracket log locator studs.
7. Place burner lava rock on top of burner between the ember log and the two front logs.
8. Place top left log (KR11) onto locator notches. Ensure the log is secure.
9. Place top right log (KR12) onto locator notches. Ensure the log is secure.

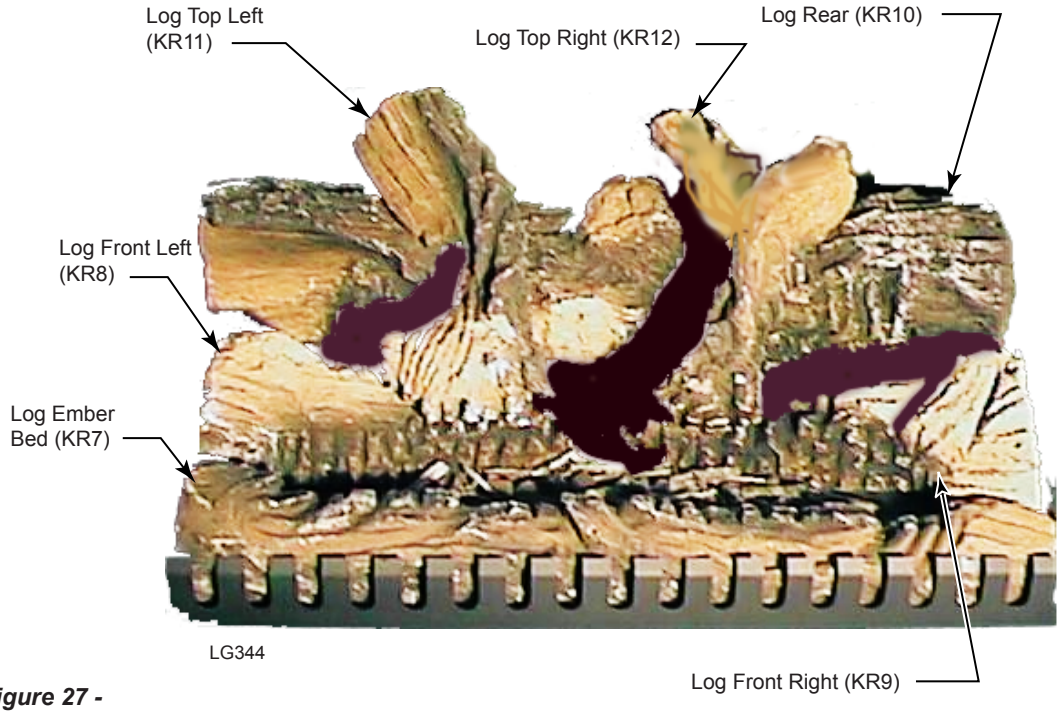



***Figure 27 - Log Placement***

## Flame & Temperature Adjustment

### SRN/SRP Models

For units equipped with 'HI/LO' valves the flame adjustment is accomplished by rotating the 'HI/LO' adjustment knob located near the center of the gas control valve. (Fig. 28)

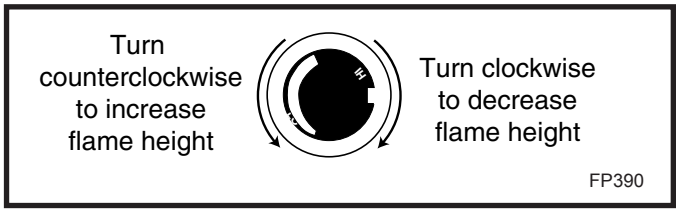



**Fig. 28** Flame adjustment knob.

### TSRN/TSRP Models

For units equipped with the RCSITEA control, all adjustments are performed with the use of a remote transmitter. Refer to instructions packaged with the transmitter or Page 22 in this manuals for operating instructions.

## Flame Characteristics

It is important to periodically perform a visual check of the pilot and burner flames. Compare them to the pictorials illustrated below (Fig. 29-30).

If the flame patterns appear abnormal contact a qualified service provider for service and adjustment.

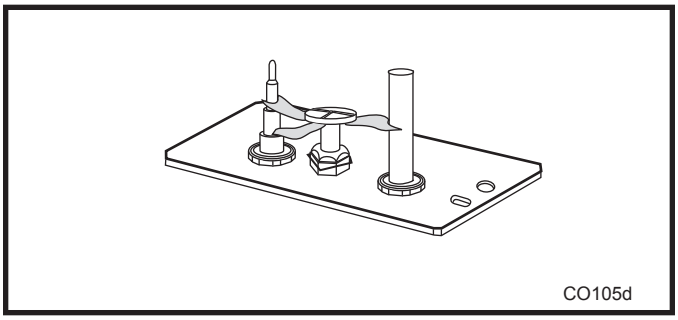



**Fig. 29** Correct pilot flame appearance.

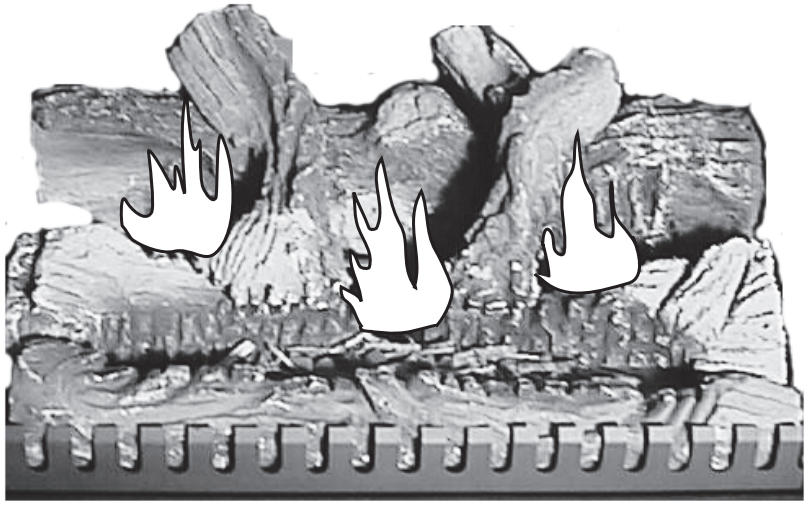


***Figure 30 -***
***Correct Burner Flame Appearance***

LG347

# Lighting and Operating Instructions

## FOR YOUR SAFETY READ BEFORE LIGHTING

**WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.**

A. This heater has a pilot which must be lit manually. When lighting the pilot follow these instructions exactly.

B. BEFORE LIGHTING smell all around the heater area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

**WHAT TO DO IF YOU SMELL GAS**

- **Do not try to light any appliance**
- **Do not touch any electric switch**
- **Do not use any phone in your building**
- **Immediately call your gas supplier from a neighbor's phone.**

**Follow the gas supplier's instructions.**

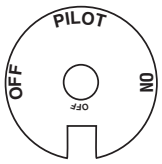
- **If you cannot reach your gas supplier, call the Fire Department**

C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, do not try to repair it, call a qualified service technician. Applying force or any attempted repair may result in a fire or explosion.

D. Do not use this stove if any part has been under water. Immediately call a qualified service technician to inspect the heater and to replace any part of the control system and any gas control which has been under water.

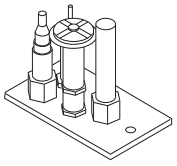
## Lighting Instructions

1. **STOP!** Read the safety information above.
2. Turn off all electrical power to the unit.
3. Turn the ON/OFF switch to "OFF" position or set thermostat to lowest level.
4. Open control access panel.
5. Push in gas control knob slightly and turn clockwise to "OFF".




**SIT NOVA**

6. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above. If you do not smell gas, go to the next step.
7. Remove glass door before lighting pilot. (See Glass Frame Removal section).
8. Visibly locate pilot by the main burner.
9. Turn knob on gas control counterclockwise to "PILOT".
10. Push the control knob all the way in and hold. Immediately light the pilot by repeatedly depressing the piezo spark ignitor until a flame appears. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 8.



- If knob does not pop up when released, stop and immediately call your service technician or gas supplier.
- If after several tries, the pilot will not stay lit, turn the gas control knob to "OFF" and call your service technician or gas supplier.

11. Replace glass door.
12. Turn gas control knob to "ON" position.
13. Turn the ON/OFF/RS switch to "ON" position or set thermostat to desired setting.
14. Turn on all electrical power to the unit.

## To Turn Off Gas To Heater

1. Turn the ON/OFF switch to Off position or set the thermostat to lowest setting.
2. Turn off all electric power to the unit if service is to be performed.
3. Open control access panel.
4. Push in gas control knob slightly and turn clockwise to "OFF". Do not force.
5. Close control access panel.

## Troubleshooting the Gas Control System

### SIT NOVA 820 MILLIVOLT VALVE

**NOTE**: Before trouble shooting the gas control system, be sure external gas shut off is in the “On” position.

| Symptom | Possible Causes | Corrective Action |
|---|---|---|
| 1. Spark ignitor will not light | A. Defective or misaligned electrode at pilot | Using a match, light pilot. If pilot lights, turn off pilot and push the red button again. If pilot will not light - check gap at electrode and pilot-should be 1/8” to have a strong spark. |
| | B. Defective ignitor (Push Button) | With the control knob in the pilot position, push the control knob all the way and hold. Check for spark at electrode and pilot. If no spark to pilot, and electrode wire is properly connected, replace the battery in the ignitor module and try again. Refer to Maintenance Section. If the problem still exists, replace the ignitor module box. |
| 2. Pilot will not stay lit after carefully following lighting instructions | A. Defective pilot generator (thermocouple), remote wall switch | Check pilot flame. Must impinge on thermocouple/thermopile. NOTE: This pilot burner assembly utilizes both a thermocouple and a thermopile. The thermocouple operates the main valve operation (On and Off). Clean and or adjust pilot for maximum flame impingement on thermopile and thermocouple. |
| | B. Defective automatic valve | Turn valve knob to “Pilot”. Maintain flow to pilot; millivolt meter should read greater than 10mV. If the reading is okay and the pilot does not stay on, replace the gas valve. NOTE: An interrupter block (not supplied) must be used to conduct this test. |
| 3. Pilot burning, no gas to main burner | A. Wall switch or wires defective | Check wall switch and wires for proper connections. Jumper wire across terminals at wall switch, if burner comes on, replace defective wall switch.. If okay, jumper wires across wall switch wires at valve, if burner comes on, wires are faulty or connections are bad. |
| | B. Thermopile may not be generating sufficient millivoltage | 1. Be sure wire connections form thermopile at gas valve terminals are tight and thermopile is fully inserted into pilot bracket.<br>2. One of the wall switch wires may be grounded. Remove wall switch wires form valve terminals if pilot now stays lit, trace wall switch wiring for ground. May be grounded to fireplace or gas supply.<br>3. Check thermopile with millivolt meter. Take reading at thermopile terminals of gas valve. Should read 250-300 millivolts (minimum 150) while holding valve knob depressed in pilot position and wall switch “Off”. Replace faulty thermopile if reading is below specified minimum. |
| | C. Plugged burner orifice | Check burner orifices for debris and remove. |
| | D. Defective automatic valve operator | Turn valve knob to “On”, place wall switch to “On” millivolt meter should read greater than 150mV. If the reading is okay and the burner does not come on, replace the gas valve. |
| 4. Frequent pilot outage problem | A. Pilot flame may be too low or blowing (high) causing the pilot safety to drop out | Clean and/or adjust pilot flame for maximum flame impingement on thermopile and thermocouple. |
| | B. Possible blockage of the vent terminal | Check the vent terminal for blockage (recycling the flue gases). |

## Instructions for RCSITEA

**RFSDV34TSR Series**

**CAUTION:** The RCSITE is only certified for use on vented heater rated equipment.

This remote control system provides a safe, reliable and user-friendly remote control for millivolt valve gas appliances, blower speed and flame height adjustment. The system can be manually or thermostatically turned on and off with the transmitter.

Carefully inspect the contents for shipping damage. If any parts are missing or damaged, immediately contact your dealer. Do not attempt to install any part of the kit unless all parts are in good condition. Refer to instructions provided with the kit for complete installation instructions.

WARNING: Make sure 120V AC fan and SIT valve are correct. If not wired correctly, damage to receiver could result. Make sure the wires do not contact the appliances any place other than at the terminals. Exposure to temperatures higher than 250°F (105°C) may cause the receiver to malfunction and cause possible fire hazard.

## Remote Transmitter

**Install Batteries**

The remote transmitter uses three (3) "AAA" batteries.

1. Press down the battery door tab and pull out to remove the battery door. (Fig. 31)
2. Install the batteries as indicated on transmitter.
3. Close the battery door by snapping in place.
4. When three (3) batteries are installed, the transmitter will initialize for 10 seconds and then is ready for use.
5. The batteries should be replaced at least once every 12 months or when the low battery indicator is displayed.

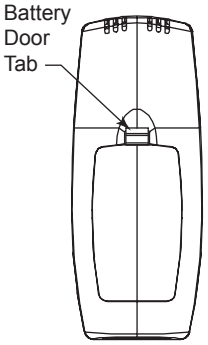



**Fig. 31** Battery door tab.

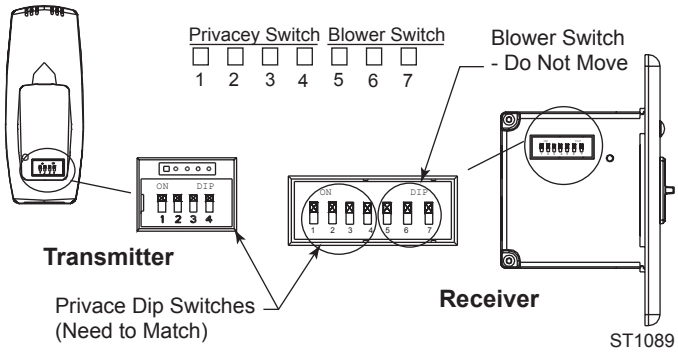
**Setting Privacy (DIP) Switch on Receiver and Transmitter**

The remote receiver and transmitter privacy (DIP) switches are preset at the factory. In the event of activation or interference from other nearby transmissions, reset the code using the following procedure:

1. There are four (4) switches on the transmitter and seven (7) switches on the receiver. Figure 33. Switches #1, #2, #3 and #4 on both transmitter and receiver are privacy switches and #5, #6, #7 on the receiver are blower switches and should not be moved. These are preset for the installed blower.
2. Slide the privacy code switches (1,2,3 & 4) on the transmitter and receiver to your choice of ON or OFF position. All switches are preset to "ON" for both the transmitter and receiver.
3. The privacy code switches (1,2,3 &4) on the transmitter and on the receiver must match in order for the system to work.
4. To check, press either the ON or OFF button on the transmitter and the receiver indicator light will blink. If not, repeat Step 2.
5. The system is now ready to operate.

**NOTE:** Refer to optional 6 Hour Shutdown.

**WARNING:** Do not use two (2) or more remote control systems in the same area with the same dip switch settings, they will communicate with each other. This may cause the appliances to malfunction.




**NOTE:** The switches on the transmitter and receiver must match.

**Fig. 32** Privacy switches.

**Reset Button**

The reset button can be used to reset the transmitter if transmitter is not working properly. The reset button is located behind the battery door cover in the lower left corner of battery compartment. Using a paper clip, press the reset button and the transmitter will reset and initialize for 10 seconds before it can be used.

## Operation

### Transmitter

#### General

The RCSITE Remote Control has two (2) operating modes: Manual and Thermostatic. The control system can be set to temperature ranges between 45°F and 90°F. The blower speed and flame height can be adjusted in either the manual or thermostatic mode.

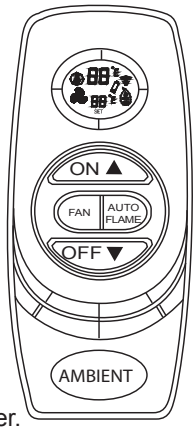



**Fig. 33** RCSITE remote transmitter.

The transmitter will operate the remote receiver from 1 foot to a maximum of 30 feet. The distance is reduce when batteries are low or when the receiver is inside a metal enclosure.

### Initial Startup

*Figure 34*

1. After initial power up or when RESET button pressed, the transmitter reset. The reset button located behind the battery door of transmitter.
2. During system power up or reset, all features of the LCD DISPLAY will be visible. After one second, the LCD will be initialized. A typical reset display is shown in *Figure 35*. Note the temperature scale is degree F.
3. Press ON button to select between °C and °F display. It will exit setting mode automatically after 10 seconds if no key is pressed. The transmitter will send an OFF signal after reset.
4. After power up or reset, the transmitter is operating in manual mode. The room temperature is shown.

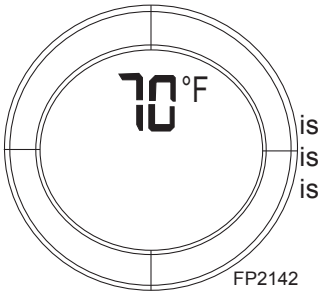



**Fig. 34** Typical Reset Display

### Manual Mode

*Figure 35*

1. Press the ON button once turn on the appliance with max flame height.
2. Press the OFF button decrease flame height. The first two (2) presses will decrease flame height to lower level. The third press will turn off the fireplace.
3. If the OFF button is held for more than three (3) seconds, the fireplace will be shut off.

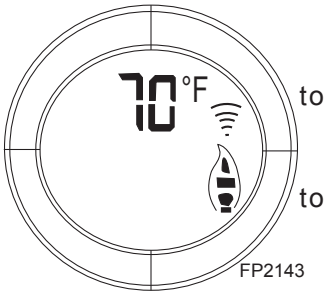



**Fig. 35** Manual mode.

### Thermostatic Mode

*Figure 36*

1. Press the AUTO/FLAME button to enter the thermostatic mode.
2. In thermostatic mode, press the ON / ▲ button or OFF ▼ button to set the desired set temperature.
3. Once the setting is completed, the transmitter will automatically turn on the fireplace when the room temperature is below the set temperature and turn off the fireplace when the room temperature is above the set temperature within 1 degree.
4. There will be a slight delay in the response of the unit (on/off) to a temperature. Room temperature is monitored every three (3) minutes.
5. Press AUTO/FLAME button to exit the thermostatic mode. The transmitter will be in the manual off mode and the fireplace will be shut off.

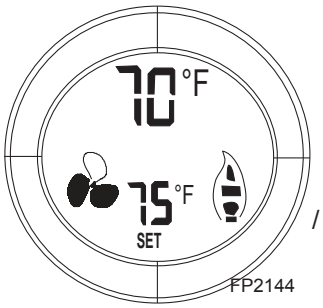



**Fig. 36** Thermostatic mode.

### Flame Height Setting for Thermostatic Mode

*Figure 37*

1. Hold AUTO/FLAME button for five (5) seconds and one number and flame icon will appear in LCD screen.
2. Use the ON / ▲ or OFF / ▼ button to set the desired flame height to 1 (min.) 2 (medium) or 3 (max.).
3. If there is no input within three (3) seconds, the new setting will be transmitted to the receiver. This setting only affects auto mode operation.
4. The default setting for transmitter is 2 (medium).

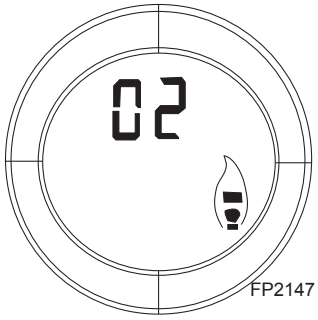



**Fig. 37** Flame height setting.

### 3-Speed Blower Control

**NOTE: Blower operates with flame on ONLY>**

*Figure 38*

1. Press FAN button once to enter blower speed setup mode at low speed initially and one of the three blade icons will display darkened on LCD display.
2. Continue to press FAN button to set the blower speed you desire.
3. If there is no input within three (3) seconds, the new setting will be transmitted to receiver. If the fireplace is on, the blower speed will take effect right away; if the fireplace is off, the receiver will remember this setting and blower is still off.
4. If you continue to press FAN button to the position that all blades are gone, the FAN icon will disappear and turn the blower off.

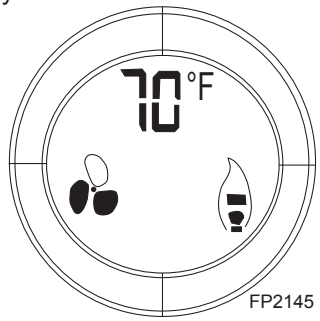



**Fig. 38** 3 speed blower control.

### Blower On Delay Time and OFF Delay Time Setting (Default 5 ON / 8 OFF)

*Figure 39*

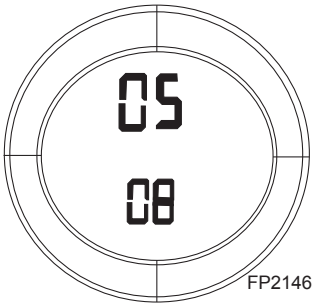



**Fig. 39** Blower time delay display.

1. Hold FAN button for five (5) seconds and two (2) numbers will appear in the LCD screen. The upper one is ON Delay Time and the bottom is OFF Delay Time in minutes.
2. Use the ON / ▲ button to set the desired On Delay Time from 0 to 15 minutes.
3. Use the OFF / ▼ button to set the desired Off Delay Time from 0 to 15 minutes.
4. If there is no input within 3 seconds, the new setting will be transmitted to receiver.
5. The default settings for both transmitter and receiver are 5 minutes for ON delay time and 8 minutes for OFF delay time.

### Low Battery Detection

*Figure 40*

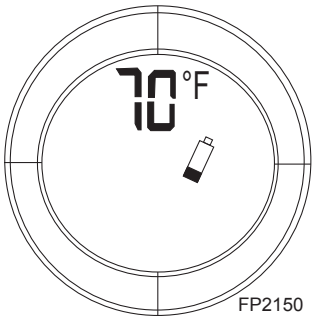



**Fig. 40** Low battery display.

1. Battery voltage is checked once a minute. When the battery voltage drops to a certain level, the low-battery icon will display on LCD, and the transmitter will turn off the appliance. The transmitter will not function anymore until fresh batteries are installed.
2. When the batteries are low, the LCD displays a low battery indicator. The low battery indicator will be displayed in any mode.
3. The transmitter will not operate with low batteries. Change the batteries before the batteries are too weak for normal operation. Turn the unit OFF before replacing batteries.

### Child-Proof Protection

*Figure 41*

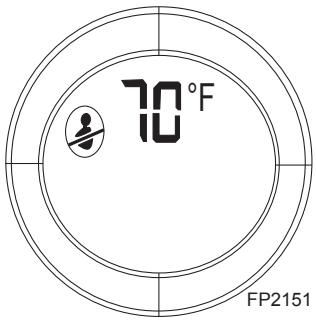



**Fig. 41** Child protection display.

1. Press and hold the ON and OFF buttons simultaneously for three (3) seconds to enter child proof mode.
2. The transmitter will not send a signal again until the childproof mode is deactivated by pressing the ON and OFF buttons simultaneously for three (3) seconds to exit child proof mode. The Childproof indicator disappears from LCD.

### Transmitter Thermal Shutdown

*Figure 42*

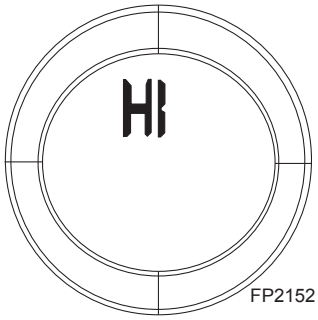



**Fig. 42** Thermal shutdown display.

1. If transmitter measures a room temperature exceeding 99° F, the LCD will display "HI" and the transmitter will turn off the appliance.
2. Transmitter will not function until the room temperature has dropped below 99° F. If transmitter measures a room temperature less than 40° F, the LCD will display "LO" and NO SIGNAL will be sent to turn on the appliance.

## Receiver

#### Slide Switch

1. ON position: The main burner will ignite and blower will come on when blower on delay time is reached and fan speed has been enabled, the flame height is max; otherwise just burner will ignite until the slide switch is placed in the OFF or RS position to turn burner off.
2. RS position: The system will only operate if the remote receiver receives a signal from the transmitter.
3. OFF position: The system is off. If fan speed has been enabled, blower will continue to operate until OFF delay time expires. The slide switch should be placed in the OFF position if you will be away for an extended period of time. If the remote receiver is mounted out of reach of children, the OFF position also functions as a safety device by both turning the system off and rendering the receiver inoperable.

#### Optional 6 Hour Shutdown

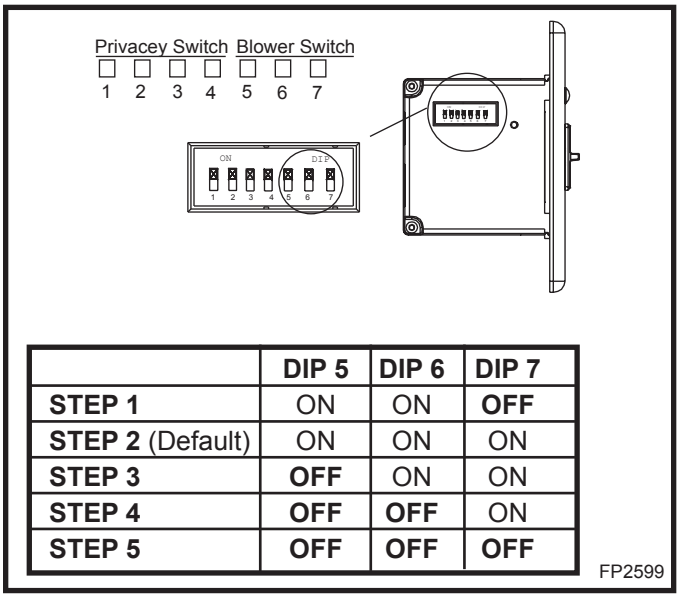
1. The receiver comes preset from the factory with a 6 hour shutdown from its last ON or flame lower operation. This is done to prevent the appliance from continuing to operate if unattended.
2. You may disable this feature if you wish. To disable, change the receiver privacy (DIP) switch #1 ONLY to the OFF position. Make sure the transmitter privacy (DIP) switches are set the same as the receiver. Follow the instructions on how to set the privacy (DIP) switch setting.
3. By disabling this feature, your appliance may continue operating unattended.

## Testing Remote Control System

1. Light the gas appliance following the lighting instructions on Page xx. Confirm the pilot light is on; it must be in operation for the remote control to operate the main gas valve and blower. Appliance control knob must be in the ON position, and ON/OFF switch must be in OFF position.
2. Slide the 3 position button on the remote receiver to the ON position and the main gas flame should ignite.
3. Slide the button to OFF and the main gas flame should extinguish, but the pilot light will remain lit.
4. Slide the button to RS (the center position). Press the ON button on transmitter to turn the system ON. The main gas flame should ignite and blower should come on after the On delay time is reached and fan speed you desire is selected.
5. Press the OFF button on transmitter to turn the system to OFF. The flame should extinguish (the pilot light will remain lit) and blower should be off after the Off delay time is you set is reached.

## Blower Speed Level Adjustment

1. The three speed levels of blower can be fine tuned by using the blower switches. (Fig. 43)
2. In the event the blower runs too slow or too fast on Low or Medium, change the blower switch setting to achieve desired speed levels.
3. Turn on the blower at low speed with the transmitter and start from STEP 1 (ON/ON/OFF), then follow steps in the chart below to set up the blower switches. The blower speed will decrease when going through the steps. Stop when the desired speed level of Low is achieved.
4. To ensure the proper Low is selected, run through Low, Medium, High to check all speeds to achieve the desired best speed levels.




| | DIP 5 | DIP 6 | DIP 7 |
|---|---|---|---|
| **STEP 1** | ON | ON | **OFF** |
| **STEP 2** (Default) | ON | ON | ON |
| **STEP 3** | **OFF** | ON | ON |
| **STEP 4** | **OFF** | **OFF** | ON |
| **STEP 5** | **OFF** | **OFF** | **OFF** |

FP2599

**Fig. 43** Blower speed level adjustment.

**NOTE:** It is very important that the Low speed is not too low that to overload blower motor.

**WARNING:** To avoid overheating the blower when the blower runs too slow, always start from higher speed (from Step 1) when adjusting speed levels using the blower switches. And stop trying the rest of the settings when desired speed level of Low is achieved.

| Troubleshooting | | |
|---|---|---|
| **Symptom** | **Causes** | **Action** |
| 1. Battery icon on LCD on transmitter.<br>2. LCD display is blank.<br>3. LCD display shows “funny” display. | 1. Low battery. | 1. Replace batteries. Change the batteries every 6 months.<br>2. Check battery installation or replace batteries.<br>3. Press reset button at the back of the transmitter. |
| 4. Appliance does not come on. | 1. Wiring/Electrical connections. | 1. Slide the switch to ON, if appliance comes on, wiring is not the cause.<br>2. If appliance, does not come on, check wiring connections. |
| | 2. Privacy (DIP) switch setting on transmitter does not match receiver. | 1. Make sure the transmitter and receiver have the same DIP switch settings. |
| | 3. Transmitter measure temperature exceeding 99°F and shows “HI” on LCD. | 1. Move transmitter to a cooler place and wait until temperature drops below 99°. |
| | 4. Distance between the transmitter and receiver is more than 30 feet. | 1. Make sure the operating distance is less than 30 feet. |
| 5. Receiver cannot receive signal. | 1. Receiver is installed in an enclosure. | 1. Make sure the receiver is not located inside too tight of an enclosure. |
| 6. Blower is not on after the stove is turned on. | 1. Blower setting is off. | 1. Press FAN key to select desired fan speed. |
| | 2. Blower delay setting is set too high. | 2. Press and hold Fan key to set desired ON/OFF delays. This is done in minutes. |

# Maintenance

**Burner and Burner Compartment**

It is important to keep the burner and the burner compartment clean. At least once per year the logs and lava rock/ember material should be removed and the burner compartment vacuumed and wiped out. Remove and refit the logs as per the instructions in this manual.

**Always handle the logs with care as they are fragile and may also be hot if the stove has been in use.**

**FK24 Fan Assembly**

The fan unit requires periodic cleaning. At least once per month in the operating season open the lower louvre panels and wipe or vacuum the area around the fan to remove any build up of dust or lint.

**Brass Trim**

Clean the brass trim pieces using a soft cloth lightly dampened with lemon oil. Do not use water or household cleaners on any brass components.

## Cleaning the Standing Pilot Control System

The burner and control system consist of:

- burner tube
- gas orifice
- pilot assembly
- thermopile
- millivolt gas valve

Most of these components may require only an occasional checkup and cleaning and some may require adjustment. **If repair is necessary, it should be performed by a qualified technician.**

1. Turn off pilot light at gas valve.
2. Allow stove to cool if it has been operating.
3. Remove window frame assembly. (Refer to Window Frame Assembly Removal section.)
4. Remove logs.
5. Vacuum burner compartment especially around orifice primary air openings.
6. Visually inspect pilot. Brush or blow away any dust or lint accumulation.
7. Reinstall logs.
8. Ignite pilot - Refer to Lighting Instructions.
9. Reinstall window frame assembly.

To obtain proper operation, it is imperative that the pilot and burner's flame characteristics are steady, not lifting or floating.

Typically, the top 3/8" to 1/2" of the thermopile should be engulfed in the pilot flame. (Refer to Page 19, Figure 30)

To adjust pilot burner: (by qualified service technician)

1. Remove pilot adjustment cap
2. Adjust pilot screw to provide properly sized flame.
3. Replace pilot adjustment cap.

The primary air shutter is set at factory and should only be adjusted, if necessary, by a qualified service technician.

## Wiring Diagrams - RFSDV34TSR

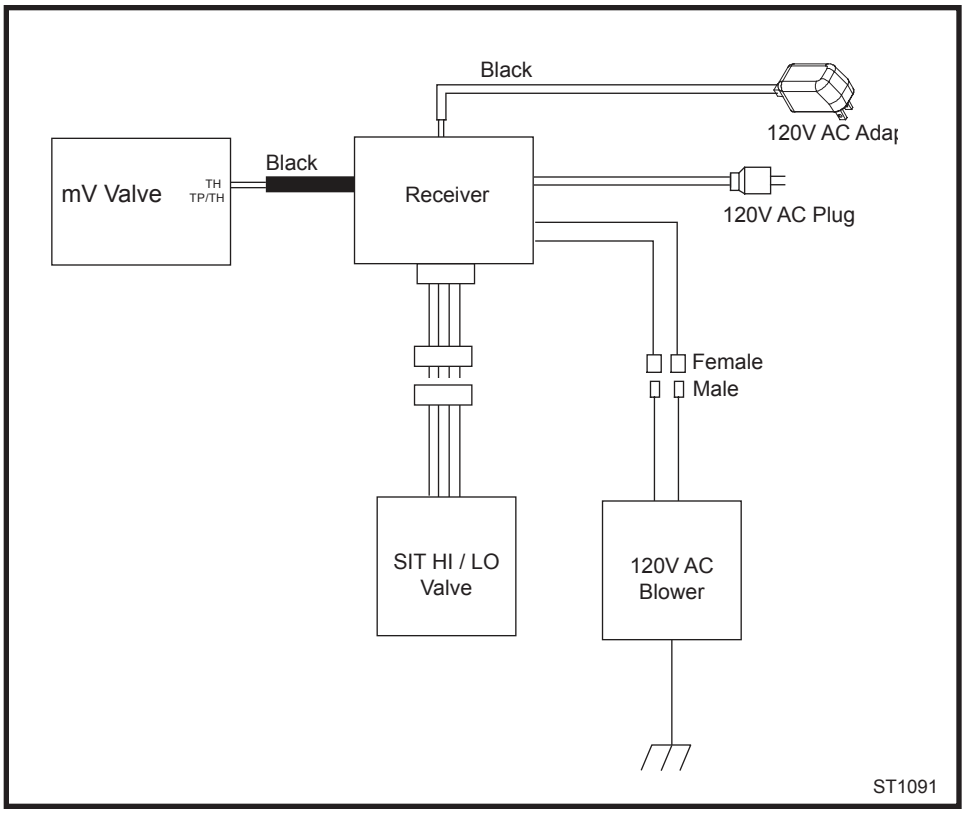



**Fig. 44** SIT Hi/Lo blower schematic.

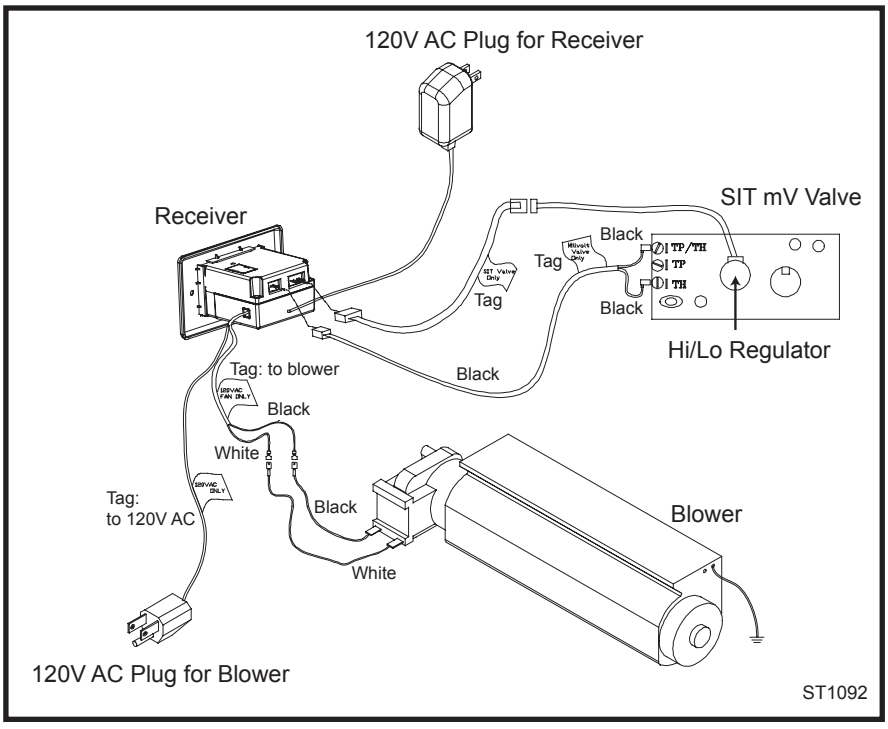
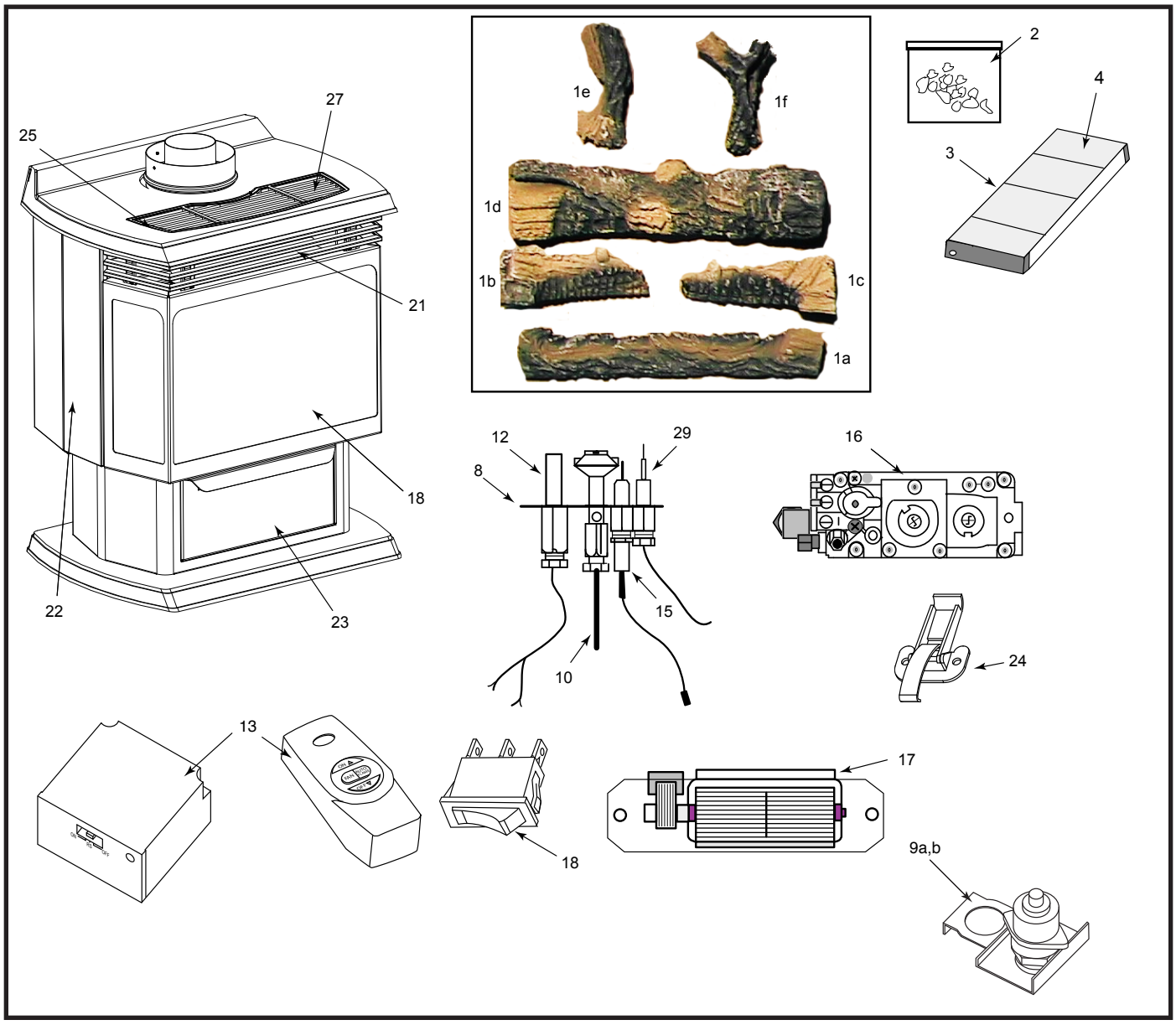



**Fig. 45** SIT Hi/Lo blower wiring.




Vermont Castings Group reserves the right to make changes in design, materials, specifications, prices and discontinue colors and products at any time, without notice.

# RFSDV34

| Ref. | Description | RFSDV34 |
|---|---|---|
| 1. | Log Set Complete | 10001763 |
| 1a. | Log - Ember Bed | KR7 |
| 1b. | Log - Front Left | KR8 |
| 1c. | Log - Front Right | KR9 |
| 1d. | Log - Rear | KR10 |
| 1e. | Log - Top Left | KR11 |
| 1f. | Log - Top Right | KR12 |
| 2. | Lava Rock | 57897 |
| 3. | Burner Housing Assembly w/tiles | 10001272 |
| 4. | Ceramic Tile (single) | 57803 |

# **RFSDV34** (continued)

| Ref. | Description | RFSDV34 |
|---|---|---|
| 5a. | Orifice, Main Burner - Nat. (not shown) | Refer to Rating Plate |
| 5b. | Orifice, Main Burner - Prop. (not shown) | Refer to Rating Plate |
| 5c. | Orifice, Front Burner - Nat. (not shown) | Refer to Rating Plate |
| 5d. | Orifice, Front Burner - Prop (not shown) | Refer to Rating Plate |
| 6a. | Orifice, Top Convertible Pilot - Nat. (not shown) | 10002268 |
| 6b. | Orifice, Top Convertible Pilot - Prop. (not shown) | 10002269 |
| 7. | Ignitor Piezo (not shown) | 14D0505 |
| 8a. | Pilot Assembly, 3 way DV Top Conv. - Nat. | 10002264 |
| 8b. | Pilot Assembly, 3 way DV Top Conv. - Prop. | 10002265 |
| 9a. | Stepper Motor - Nat. | 50D0099 |
| 9b. | Stepper Motor - LP | 50D0100 |
| 10. | Pilot Tube w/fittings SIT | 10001296 |
| 11. | Manifold Tube w/fittings (not shown) | 57318 |
| 12. | Thermopile, RN & RP | 26D0566 |
| 13. | Remote Kit (Hi/Lo, Blower) - TSR Series | RCSITEA |
| 14. | Manifold Assembly (not shown) | 10000824 |
| 15. | Electrode ignitor w/cable 24” | 10001297 |
| 16a. | Valve SIT820 - Nat. | 37D0117 |
| 16b. | Valve SIT820 - LP | 37D0118 |
| 17. | Fan Assembly w/bracket - TSR Series | 51869 |
| 18. | Window Frame Assembly (complete with glass) | 10001917 |
| 19. | Window Glass w/Gasket Assembly Kit (not shown) | 10001916 |
| 20. | Window Glass Gasket Kit (not shown) | 10001983 |
| 21. | Front Louvre Assembly | 10001370 |
| 22. | Cabinet Side Door | 10001792 |
| 23. | Control Door Assembly | 10001790 |
| 24. | Clamp | 10000949 |
| 25. | Top Grille Panel | 10001791 |
| 26. | Magnet, Ceramic Side Doors (not shown) | 10001705 |
| 27. | Screen Cabinet Top | 10001749 |
| 28. | Plate Relief w/Gasket Assembly (not shown) | 10002862 |
| 29. | Thermocouple SIT | 24D0808 |
| 30. | Relief Plate w/Gasket Assembly Burner Tray (not shown) | 10004192 |
| 31. | Control Panel (not shown) | 20300163 |

**Fuel Conversion Kits**

Conversion Kit, NG to LP - RFSDV34TSR Kit #RFSDV34CKPS
Conversion Kit, LP to NG - RFSDV34TSR Kit #RFSDV34CKNS

# Optional Accessories

## Fan Kits

### FK24 Fan Assembly

This auxiliary fan system increases the efficiency of the circulation of the heating air.

The FK24 fan kit allows variable speed control of the circulation fan and also incorporates a heat sensor in the circuit.

**Specifications**

115 Volt / 60Hz / 56 Watts

**Maintenance**

The fan itself does not require regular maintenance, however periodic cleaning of the fan and the surrounding area is required.

Check the fan and the area around the fan assembly and wipe or vacuum at least once per month during the operating season.

**Installation**

**NOTE: The FK24 is an option for Model RFSDV24; standard with model RFSDV34. Install fan before connecting gas line to stove.**

1. Open front access door; remove the cover valve.
2. Remove pre-mounted fan bracket at the rear of the pedestal. Remember this location for reinstallation.
3. Open the fan kit; mount FK24 replacement fan bracket. (Fig. 47)
4. Install the fan through the opening of the front access door, with the outlet pointed up and the fan mounting bracket toward the rear of the stove. (Fig. 48) The fan mounts over two studs that hold the fan just below the firebox floor. Secure the fan in place with two nuts provided.
5. Locate the fan speed control/junction box on screw studs located on the right side of the cover valve. Tighten with nuts provided.
6. Install thermal sensor element on screw studs located to the right of the gas valve below the burner base.
7. Reinstall cover valve. Plug in grounded service cord to a convenient wall receptacle.

**This fan assembly is furnished completely wired. It must be electrically connected and grounded in accordance with local codes.**

**US installations:** Follow local codes and the National Electrical Code ANSI/NFPA No. 70.

**Canadian installations:** In the absence of local codes, follow current CSA C22.1 Canadian Electrical Code.

**Disconnect the power supply before servicing the fan.**

**Refer to Page 28 for rewiring replacement components.**

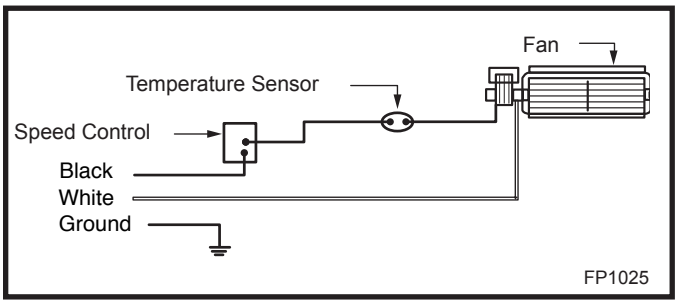



**Fig. 46** FK24 fan wiring.

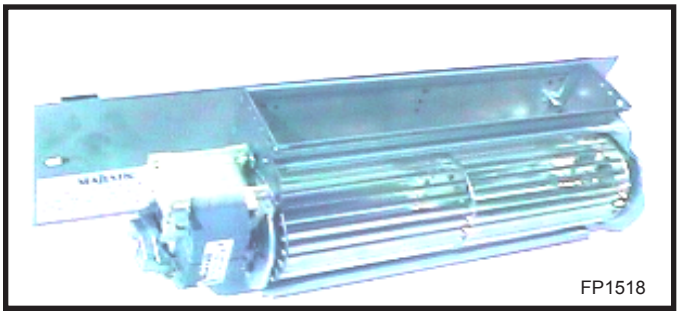



**Fig. 47** FK24 fan with existing fan bracket.

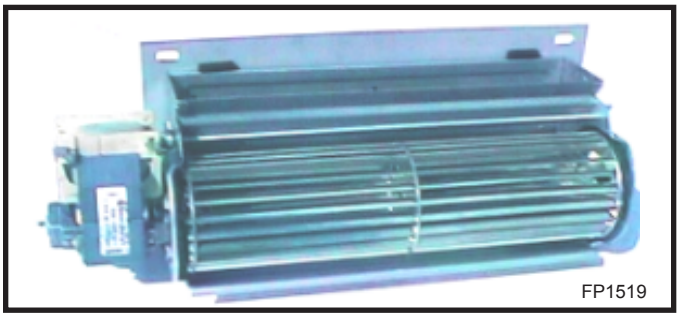



**Fig. 48** FK24 fan kit with replacement fan bracket.

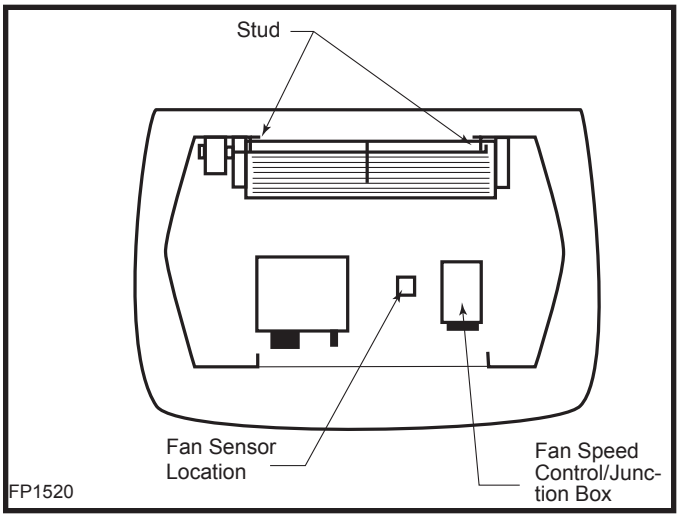



**Fig. 49** FK24 fan installation.

## Optional Brass Trim Kit

**A** decorative brass window trim kit, Model RFSDV34TKAP/S is available for the RFSDV34 Freestanding Stove.

**Kit contents:**

(1) Brass window trim
(8) Magnets
(3) Brass trim rings (for the vent pipe joints)

**Installation Procedure**

1. Unpack the kit and confirm all parts are present.
2. It is very important to remove all the protective plastic wrap from the brass components
3. Attach the magnets to the trim. (Fig. 50)
4. Position trim against the stove window frame assembly. The trim will be held in place by the magnets.
5. Fit the brass rings in place around any visible vent joints.

**NOTE: Use only lemon oil to clean this window trim as directed below. Lemon oil can be obtained from supermarkets and hardware stores. Do not use brass polish or household cleaners, as these products will damage the trim.**

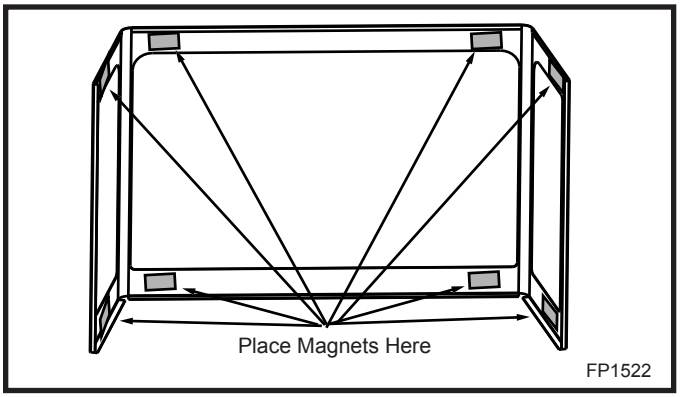



**Fig. 50** RFSDV34TKA magnet locations.

**Clean brass trim with a soft clean cloth slightly dampened with lemon oil. Buff with a soft dry cloth.**

## Remote Control Options

These remote controls are available as an option only on stoves fitted with RN/RP gas control valves.

| | |
|---|---|
| Thermostatic Remote Control | RCST, RCT, RCSTE, RCSTEB, RCSIT, RCSITE, WWTD |
| Remote Control On/Off | RCB, RCMT, RCBE, WMTD |
| Wall Thermostat Kit | WT |
| Wall Switch Kit | MVWS |

# LIMITED LIFETIME WARRANTY POLICY

**LIFETIME WARRANTY**

The following components are warranted for life to the original owner, subject to proof of purchase: Firebox, Combustion Chamber, Heat Exchanger, Grate and Stainless Steel Burners.

**FIVE YEAR WARRANTY**

The following components are warranted five (5) years to the original owner, subject of proof of purchase: Ceramic Fiber Logs.

**BASIC WARRANTY**

Vermont Castings Group warrants the components and materials in your gas appliance to be free from manufacturing and material defects for a period of two years from date of installation. After installation, if any of the components manufactured by Vermont Castings Group in the appliance are found to be defective in materials or workmanship, Vermont Castings Group will, at its option, replace or repair the defective components at no charge to the original owner. Vermont Castings Group will also pay for reasonable labor costs incurred in replacing or repairing such components for a period of two years from date of installation. Any products presented for warranty repair must be accompanied by a dated proof of purchase.

This Limited Lifetime Warranty will be void if the appliance in not installed by a qualified installer in accordance with the installation instructions. The Limited Lifetime Warranty will also be void if the appliance is not operated and maintained according to the operating instructions supplied with the appliance, and does not extend to (1) firebox/burner assembly damage by accident, neglect, misuse, abuse, alterations, negligence of others, including the installation thereof by unqualified installers, (2) the costs of removal, reinstallation or transportation of defective parts on the appliance, or (3) incidental or consequential damage. All service work must be performed by an authorized service representative.

This warranty is expressly in lieu of other warranties, express or implied, including the warranty of merchantability of fitness for purpose and of all other obligations or liabilities. Vermont Castings Group does not assume for it any other obligations or liabilities in connection with sale or use of the appliance. It states that do not allow limitations on how long an implied warranty lasts, or do not allow exclusion of indirect damage, those limitations of exclusions may not apply to you. You may also have additional rights not covered in the Limited Lifetime Warranty.

Vermont Castings Group reserves the right to investigate any and all the claims against the Limited Lifetime Warranty and decide upon method of settlement.

**IF WARRANTY SERVICE IS NEEDED...**

1. Contact your supplier. Make sure you have your warranty, your sales receipt and the model/serial number of your Vermont Castings Group product.
2. DO NOT ATTEMPT TO DO ANY SERVICE WORK YOURSELF.

Canada

ENERGUIDE

**Look for the EnerGuide Gas Fireplace Energy Efficiency Rating in this brochure**

*Based on CSA P.4.1-09*

| Efficiency Ratings | | |
|---|---|---|
| Model | EnerGuide Ratings Stove Efficiency (%) | D.O.E. (AFUE %) |
| RFSDV34TSRN | 72.1 | 70.0 |
| RFSDV34TSRP | 72.1 | 70.0 |

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We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

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